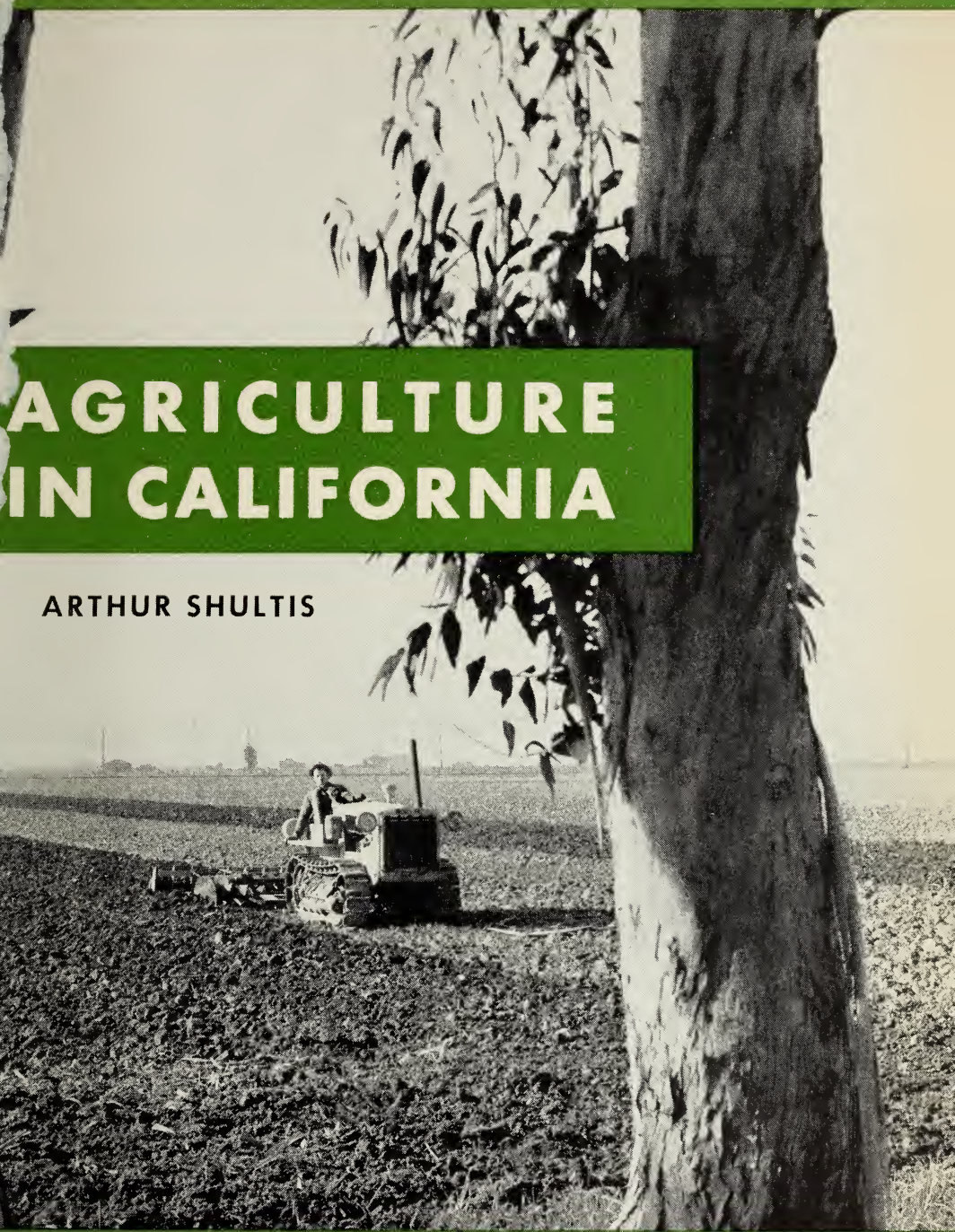
Division of Agricultural Sciences
UNIVERSITY OF CALIFORNIA



AGRICULTURE IN CALIFORNIA

ARTHUR SHULTIS

CALIFORNIA AGRICULTURAL
Experiment Station
Extension Service

CIRCULAR 474

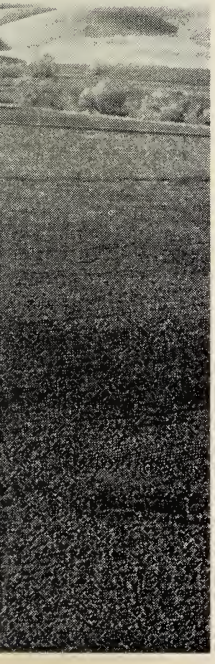
AGRICULTURE in CALIFORNIA . . .

is a big business, and it's getting bigger. Successful farming in this state requires considerably more than ownership of land—also involved are adequate capital, managerial ability, technical knowledge and skill in several types of jobs, the willingness to work and be thrifty. The California farmer is more of a businessman than a laborer, and farming in California is getting to be more and more BIG BUSINESS.

Consider the things that make California's agriculture different from that of most other states: Almost 200 dif-

The scenery may be beautiful but the work is just as hard anywhere.

When flowers are raised for the market you tend them by the acre, not by the garden plot. This field is near San Francisco.



ferent crops may be grown commercially in different areas of the state—areas from about 2,000 feet elevation to slightly below sea level—areas where the annual rainfall will average over 70 inches to those that will record from zero to five inches a year.

In California, the national trend toward larger, mechanized farms is seen in exaggerated form—the days of the small, hand-operated farm are gone. And while many standard pieces of farm equipment can be made to work

NOT ONLY IS IT BIG BUSINESS — IT . . .

on several different crops, large, highly specialized machinery is needed to farm certain crops successfully.

No . . . farming in California is not the simple way to a life of ease and luxury that it seems to many people. No longer will " a few acres of oranges and a few chickens" provide an adequate living for a retired or semi-retired couple who hope to spend their days absorbing California's famous sunshine. But it's still a fine way to live if you can afford it.

Some California crops can be raised up to the bases of its famous mountains. Mt. Shasta, in the background, pushes its peak to over 13,000 feet elevation.

Some crops grow below sea level. Here date palms are tended in the desert area of the southeastern part of the state. Date farming requires specialized equipment.

QUITE OFTEN REQUIRES SPECIALIZED EQUIPMENT

If you are considering farming in California as a vocation; if you are considering investing in farm land as a future investment; if you are interested in a part-time farm or rural home, this circular will provide you with considerable information you will need.

AND . . .

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This circular replaces former Extension Circular 173.

FOR LOCAL INFORMATION . . .

look for these blue and gold highway signs. Trained agriculturists will provide free information and literature that can be most helpful.

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MAY, 1959

AGRICULTURE in CALIFORNIA

ARTHUR SHULTIS

THE OVER-ALL PICTURE

of California's agricultural crops, practices, possibilities

ANYONE WITH ENOUGH MONEY can buy a farm in California. But if the purchase is made with the intent of turning the farm into a profitable business, the future success of the venture and the contentment of the owner and his family depend on the outcome of a great many decisions. Many of these decisions should be made before purchase.

Farming in California is an exacting, commercialized business. It requires a high degree of ability and a sizable capital investment.

Farming in California is different from farming in most other sections of the United States because of the greater variety of commercial crops that can be raised, and their more exacting techniques of production.

The person who is considering farming in California to make all or part of his living will do well to:

Consider carefully before making up his mind.

Study all factors involved—investigate all possibilities thoroughly.

Seek assistance from individuals and organizations qualified to give sound advice based on successful experience.

The Agricultural Extension Service (of the University of California and the United States Department of Agriculture) has local offices in all of the major farming counties of the state. These Farm Advisors (called County Agents in most other states) have literature and local information and are prepared to advise anyone seeking help. This service is free. Most College of Agriculture and some U.S.D.A. publications are available at these local offices.

This circular will attempt to answer questions that concern the newcomer or the farmer making a change of location.

Do you have what it takes?

First, a brief statement on the business side of California agriculture:

Farming in California is usually an intensive, specialized, commercial undertaking conducted for the purpose of obtaining income from the employment of labor, managerial ability, and capital. It is not an occupation of the last resort for those who cannot succeed elsewhere.

As stated on page 2, success requires good management, adequate capital, technical knowledge of agricultural processes, many skills, industry, and thrift. A California farmer is more of a businessman than a laborer. In this day of labor-saving machinery and skilled workers that may be hired, a strong back is not as essential to the farmer as a good head. To be successful he must make correct decisions and see that operations are performed efficiently and according to schedule.

For anyone interested in a farm or rural home in California, the first consideration is the *purpose.* Why do I want a place here? Do I want to make an investment in land for security and growth of my capital? Do I want to farm on a commercial scale for profit, or do I merely wish to live in the country? This is followed by many other questions: Am I suited to farming? How big a farm do I want? Do I have enough capital? What type of farming do I prefer? Where do I want to live? Can I make better use of my resources in some agricultural service business? Do I have enough income from other sources to enjoy a good living and security on a small home farm or country home in California?

The reader should try to answer these questions as he reads this circular. It will help to narrow his choice. He will need to consider and choose from a wide range of climatic conditions and types and sizes of farms. Alternatives can be compared and a decision based on valid information. He should read this before he buys.

Size is important. Some people have made serious mistakes by acquiring a farm that cannot meet their needs, so we recommend that you bear your purpose in mind as you continue to read, particularly when you come to the discussion of size and capital requirements under types of farms. By minimum size we mean one whose size is barely adequate to furnish sufficient employment and income for the support of a full-time farmer and his family. Fifty-three percent of the farms listed by the United States Census of Agriculture in California (Table A) had gross incomes of less than $5,000, and were obviously too small to provide sufficient net income from farming alone to support a family adequately. These low-income farms are fine, but only for those who recognize what they can provide and still want them. Others, who thought they could build a small place up to provide an adequate income are disappointed. It seldom works out that way. With too small a start, the income is insufficient to permit increasing the size.

What about the future?

In looking ahead and considering recent trends, there appears to be no reason why farming in California should not continue to prosper as it has in the past. There may be times, as in the depression of 1932–1934, when low prices for practically all products will result in widespread distress and some financial failures and losses of farms. While such a serious depression would hurt California's agriculture seriously, with the many income-stabilizing features now in our economy, such as bank deposit, unemployment and retirement insurance, public works programs, it is unlikely that proportionately as many good farmers would fail as in the 1930's. Certainly there is no more danger in California than in other states. Commercial farming in this state has usually returned wages for the work done, with a moderate re-

turn on invested capital and sometimes additional profit for good management.

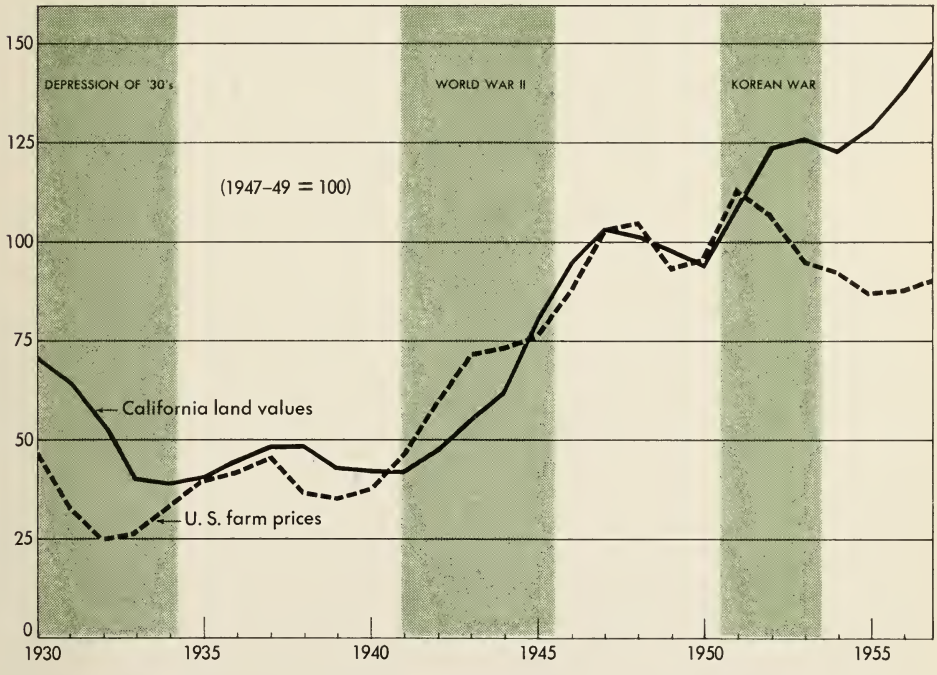
It is true that there has been a rather high turnover of farmers in California. Many enter the business and fail or sell out, perhaps because of the high capital investment and other exacting requirements for success. This theory seems to be supported by the fact that most of the failures occur among those who have not become established, full-scale commercial farmers.

California has droughts, floods, freezes, and other natural hazards, but these normally affect only a small part of the state and only in occasional years. The state depends more on irrigation than on rainfall. Dry years reduce incomes of dryland farmers, but there is usually enough water from reservoirs, mountain runoff, and irrigation wells to avert serious losses on irrigated land. Floods are being brought under control by reservoirs and levees. Frost damage is reduced by time of planting and orchard heating. Control measures are available for insects and plant diseases, although new controls must be continually devised to meet new infestations. In fact, California farmers exercise more control over natural hazards than is done in most states.

While California is not a hazardous place to farm from the physical and biological aspect, there are higher business hazards from price uncertainties due to higher investments and operating costs. California's agriculture is more likely to suffer decline in net income from falling prices and rising costs than from natural causes.

A smaller proportion of California farm production is subject to acreage allotments and government price supports than is the case for the country as a whole. However, production of crops not under acreage control has been increasing here and elsewhere, resulting in

California's land values have remained high over the years.



higher total production and lower prices. Higher wages, taxes on land, land values, and operating costs are making it more difficult to make a profit here than formerly. In many respects adjustments to efficient, large scale commercial production in California already enable profitable operation at lower prices. Many California farms enjoy a wider range of opportunities for shifting from unprofitable to more profitable lines. Farming here can make money in the long run, but it *must* be efficient—based on high yields of high quality products, produced at reasonable costs.

California is the leading state in fruit and vegetable production. A large volume of fresh, dried, and canned products is shipped to other states and foreign countries. Some of these are not widely produced in other states, or at least not at the time of year when they are available in California. This business will continue. The loss of export business resulting from World War II created some troublesome surpluses, but these are being alleviated through marketing programs intiated with government assistance, and by gradual adjustments of acreage.

States closer to the eastern market have some advantage in lower transportation costs. These states are increasing their production and reducing California's share in the market at certain times and for certain products. This increased competition applies principally to California's specialty vegetable and fruit production, but is not expected to result in any decline in total production in California. It may cause some shifts between crops and more dependence on expanding local markets.

California is a deficit state in the production of meat, butter, cheese, feed grains, and sometimes eggs—that is, the state produces less of these items than it consumes. Transportation costs on these products from other areas result in slightly higher prices here, which in turn is making it possible to produce and market more of them in California for consumption by the state's growing population.

California agriculture is approaching maturity

Under present conditions of water supply, all suitable California farming land is presently in use. The improvement and irrigation of land now grazed or dry-farmed will probably account for most of California's future agricultural expansion.

Irrigation began in the early days at the Spanish missions, developing slowly

SPRAYING FOR PESTS—SPRINKLING FOR

until 1870, by which time about 60,000 acres were under irrigation. It has since increased rather rapidly to include over 7,000,000 acres at the present time.

In the Spanish and Mexican era, from 1770 to 1848, cattle production (largely for hides) was the main agricultural activity, except for a little farming around the missions. The American phase began a little over 100 years ago with the arrival of the hordes of Americans during the gold rush. Grain production then spread over much of the arable land. Fruit and vegetable production increased, but only for local consumption until after 1869, when the transcontinental railroads made development of the great fruit shipping business possible.

The early trial and error in locating crops and orchards is giving way to a knowledge of the best adapted crops for each locality. Most areas are settling down to the intensive production of these crops. Although California agriculture is maturing, it will probably remain fluid in its ability to develop and shift enterprises to meet changing demands.

Water prospects

Much has been said and written in recent years on the problem of adequate water in California. Present use is around 21 million acre feet. (An acre foot of water is enough to cover an acre 1 foot deep.) About half of this is being pumped from underground sources, a few of which are being overdrawn and seriously depleted. The real problem lies in the fact that 70 per cent of the average annual runoff is north of the latitude of Sacramento and 80 per cent of the ultimate estimated need for water is south of that line. Furthermore, this runoff occurs largely in the winter months and there are wide variations from year to year. Because of increasing population, continued supplies will require that in the near future additional water must be stored and, where necessary, transported to shortage areas.

After many years of study, the State Department of Water Resources issued The California Water Plan in 1957, showing an annual runoff within the state of 71 million acre feet. This, plus California's rights in and to Colorado River water, is sufficient to provide the estimated 51 million acre feet of water needed under ultimate future agricultural and urban development. That would be enough water to irrigate 20 million acres and still provide for 3.6 million acres of urban, suburban and industrial development. The plan would also provide flood control, salinity control, and increased water for recreation.

IRRIGATION: BOTH CAN BE COSTLY

This plan describes a vast statewide system of reservoirs, aqueducts, power plants, and pumping plants that are considered feasible. The ultimate goal would be to store, transport, and deliver adequate water when and where needed. Its construction would take many years and cost billions of dollars. Legal and financial obstacles must be overcome before some major works can be started. A single co-ordinated plan embracing existing construction projects already under way or planned and others of various sizes to be built in the future is considered necessary. Future construction of the many separate units would presumably be undertaken progressively over the years as they became needed and economically feasible.

Future water needs can be met. But without prompt action water may not be brought to some areas soon enough to avert further shortages. So the investor in farm lands should look carefully into the present and proximate supply of irrigation water for any land under consideration. Most lands now irrigated have a dependable supply for the future and no appreciable shrinkage of agricultural production because of water shortage is anticipated.

Farm land must be bought at full price

There is little chance of buying a farm in California at less than its full market price. Tax-delinquent lands seldom have any agricultural value. Some grazing and dry-farmed land, currently of low value, can be improved by irrigation when water is obtainable. but there may be considerable cost for leveling, irrigation facilities, and other improvements. A proven farm with immediate income possibilities would ordinarily be a better buy.

There are practically no opportunities for obtaining a farm or ranch by homesteading public land in California.

Although about 47 per cent of the land area is owned by the federal government, almost none of this is presently suitable for farming. Most of it is in national forests, some in national parks and military reservations, about 2.4 million acres in grazing districts, and 13 million acres of undistributed public land are administered by the Bureau of Land Management of the Department of the Interior. This latter block is largely desert and currently unsuited to farming.

Only where an area is shown to be suited to farming will it be so classified and opened to homesteading. Small blocks of such land may be furnished water from time to time and then be made available. All the grazing land in grazing districts and national forests is fully utilized by adjacent ranchers on a permit basis. To obtain a permit to graze stock on public lands the farmer must show that he owns a ranch and some livestock.

California agriculture is highly mechanized

For a long time the high cost of farm labor in California has resulted in widespread use of mechanical power. Broad. level fields and large, specialized farms have also favored large tractors and specialized farm machinery. Many ingenious machines have been developed or improved here—some by farmers or by local machine shops.

The replacement of horse and mule power by tractors and trucks is practically complete. According to the 1954 census, only 6 per cent of the farms had horses or mules and no tractors; another 14 per cent had both tractors and horses; 44 per cent had tractors and no horses. The remaining 36 per cent reported neither, but probably hire any work needed. Draft horses are never seen in the main agricultural areas, and many of the 82,260 horses reported on 24,232 farms were probably saddle horses. Some 149,384 tractors were reported on 77,034 farms, about 1.9 per farm. A total of

Typical of big, specialized equipment in California is this machine used for picking cucumbers. Uncomfortable as it looks, the pickers race each other for places on this machine rather than pick by hand—the fate of the less fleet.

129,416 motor trucks were reported on 77,569 farms; 1.7 per farm reporting. Automobiles reported on 106,118 farms totaled 173,562.

Practically all farms in major farming areas have electricity. The large power demand for pumping irrigation water favored early distribution of electricity over most of the state. In 1954, 95 per cent of the farms had electricity; 95 per cent had running water in the dwelling; 77 per cent had telephones.

California probably uses the highest horsepower per farm in tractors, trucks, motors, and engines, of any state. This contributes to high production per farm and per man, but also necessitates a large investment in mechanical equipment to compete successfully.

Farm-to-market roads are usually good

County roads and highways in California are relatively good—passable the year around. Few farms or ranches are more than a short distance from paved or hard-surface roads that lead anywhere a farm family might wish to go. This is an advantage in farming in California, but is not without its cost in high property and gasoline taxes.

Expanding population—more markets—new problems

Population in California has been increasing rapidly and this trend is expected to continue. The 1950 census counted 10,586,223, which is over three times the 3.4 million recorded in 1920—just thirty years earlier. Population is currently estimated at 14,000,000 in 1958, or a 13 per cent increase in the last eight years. This increase has brought rapid development of new industries, housing and public services, with many problems and adjustments not yet resolved. It has created more local markets for agricultural products, but the expanding of residential and industrial areas around most of the cities and many of the smaller towns has withdrawn much good agricultural land from production. Farmers have been displaced, taxes increased and living costs have risen. It has resulted in an abnormally high demand for farm property and the prospective farmer must count on paying unusually high prices.

Table 1. California Acreage and Value of Crop Production, 1957

	1,000 acres	$1,000
FIELD CROPS		
Barley	1,967.0	$ 77,106
Beans, all dry edible	267.0	30,206
Corn	259.0	26,641
Cotton, lint and seed	711.0	267,718
Flaxseed	35.0	4,209
Grain Sorghum	236.0	16,124
Hay, alfalfa	1,170.0	127,296
Hay, other	836.0	25,853
Hops	5.6	3,963
Oats	223.0	5,383
Potatoes	113.7	47,774
Rice	226.0	43,537
Sugar Beets	197.0	47,751
Sweet Potatoes	13.0	7,615
Wheat	283.0	13,137
Total Field Crops	6,542.3	$744,313
FRUIT AND NUTS	Bearing	
Almonds	88.2	18,938
Apples (12 main counties)	23.0	10,740
Apricots	36.7	17,034
Avocados	19.8	6,952
Bushberries	3.5	3,372
Cherries	9.4	8,806
Dates	4.7	2,633
Figs	21.6	5,036
Grapes, all varieties and uses	399.0	142,005
Grapefruit	7.5	4,904
Lemons	51.1	36,774
Oranges	148.6	102,092
Nectarines	4.7	5,328
Olives	27.9	8,732
Peaches	78.9	49,946
Pears	38.7	26,276
Plums	22.3	12,792
Prunes	84.9	33,165
Walnuts	118.7	26,175
Total Fruits and Nuts	1,189.2	$521,700
VEGETABLES—Processing and Market		
Artichokes	9.4	2,891
Asparagus	75.8	19,886
Beans, Snap	7.8	10,769
Beans, Green Lima	29.9	6,690
Broccoli	24.5	8,491
Brussels Sprouts	5.3	3,772
Cabbage	9.4	4,802
Cantaloupes, Honeydew, Persian Mellons	47.0	32,976
Carrots	23.4	29,384
Cauliflower	12.8	5,659
Celery	17.3	33,813
Corn, Sweet	18.5	6,968

Table 1. (Continued)

	1,000 acres	$1,000
VEGETABLES (Continued)		
Cucumbers	6.5	4,535
Garlic	2.3	1,812
Lettuce	134.6	83,978
Onions	11.0	10,832
Peas, Green	14.3	3,052
Peppers	8.3	7,256
Spinach	11.7	2,834
Strawberries	20.7	32,120
Tomatoes	167.1	92,597
Watermellons	18.7	7,319
Miscellaneous Vegetables	21.5	16,800
Total Vegetables	697.8	429,236
Total Field Crops and Fruit and Nuts		1,266,013
Total Livestock and Products Sold		1,017,282
Total all Agricultural Products		$2,712,531

Source: California Crop and Livestock Reporting Service.

Table 2. Value of California's Livestock and Products Sold—1957

		Number (1,000 head)	Quantity sold (1,000's)	Value of production ($1,000)
Cattle and Calves	No. Jan. 1	3,870	1,788,670 lbs.	343,682
Hogs	No. Jan. 1	438	93,976 lbs.	18,845
Sheep and Lambs	No. Jan. 1	1,984	148,788 lbs.	27,928
Wool	No. Shorn	2,834	17,560 lbs.	10,185
Turkeys	No. Raised	14,666	268,971 lbs.	58,905
Farm Chickens	No. Raised	25,779	67,901 lbs.	9,099
Commercial Broilers and Fryers	No. Raised	43,490	139,168 lbs.	30,060
Chicken Eggs	Av. No. Layers	20,761	374,750 doz.	138,283
Milk and Cream	Av. No. Milk Cows	868	7,708,000 lbs.	355,938
Other Livestock and Poultry				24,357
Total				$1,017,282

Source: California Crop and Livestock Reporting Service.

The chart on page 9 shows recent trends in the indexes of land value in California together with the index of prices of farm products for the United States. Land values have been increasing faster in California than in the United States as a whole, despite a decline since 1950 in farm product prices. Recent purchases of California farms have been largely by California farmers, either those increasing their operations or those who have sold land at a high price in urban areas and are buying elsewhere. Present market values in many parts of the state are considerably above estimated agricultural value. (Agricultural value is the value upon which a reasonable rate of return would be realized with agricultural use.)

It may cost more to buy a farm capa-

ble of producing a given net income in California than in most other states. Prospective purchasers of farms will be competing in a market where demand exceeds supply.

Farm income is high

California ranks highest of the 49 states in total gross and net incomes realized by farm operators with estimates by the U.S.D.A. of $2,890.7 million gross and $943.9 million net income for 1957. This is an average gross income per farm of $21,899 and realized net income of $7,422. Yet only 37 per cent of California's land area is in farms, with 13 per cent cropland.

The high income obtained from this limited area is due to a warm, semi-arid climate, irrigation, fertile soils, productive grazing land, and the progressive nature of California's farmers.

It has been frequently said that this state has over 200 commercial crops. This figure would be higher if seeds and flowers were counted by kinds. California is often thought of as mainly a fruit state and fruit farms do exceed in number any other type, yet orchards and vineyards occupy only 10 per cent of the total crop acreage. Livestock, dairy, and poultry industries are large, though still inadequate to supply local markets. California is a very large producer of field and vegetable crops. Tables 1 and 2 show the farm value of most of California's main products for 1957, although many important crops, such as seeds and horticultural specialties are omitted either for lack of data or space. This diversity of crops and products is due to the wide range in climatic conditions resulting from the size, location, and topography of this unusual state.

Tract developments and their attending shopping centers are competing with farmers for California land. This one near Hayward is replacing some former orchards.

AGRICULTURAL FACILITIES

a wide variety of crops, weather, temperatures, soils

Geography plays an important part

California extends from the Mexican border nearly 1,000 miles northward along the Pacific Ocean, and inland from 140 to 220 miles. Within its 156,801 square miles are many areas with different elevations, topography, soils, rainfall, temperature, and other factors which are adapted to a wide range of crops, grazing, timber, and recreational uses.

The principal topographical features of California are its mountains, which create, protect, and water its productive valleys and coastal benches. The Coast Range lies along or near the coast. The Sierra Nevada lie along the eastern border, and between these ranges is the Great Valley—the Sacramento in the north and the San Joaquin (pronounced wau-keen′) in the central part of the state. Mountains separate the San Joaquin Valley from the small but intensively farmed southern California coastal plain to the south. In the southeastern part of the state is a great area of barren desert containing a few productive irrigated areas. A glance at the map on page 19 will help to make the state's topographic features clear.

About one fourth of the land area of California is in level, productive valleys and coastal plains below 500 feet in elevation. Most of the cropland is here. The rest of the state is desert, rolling foothills and rugged mountains ranging from 280 feet below sea level to 14,000 feet above.

Climate—California has many different kinds

California offers great variety in climate, from the hot, dry, southeastern desert to the cool north coast and the cold winters in the mountains on the north and east. As the map shows, diversity of climate results from the location and topography of the state, the adjacent Pacific Ocean with its moderating influence, the mountain barriers, and the great range in latitude from north to south. The resulting local differences in rainfall, summer and winter temperatures, length of growing season, wind, humidity, and fog largely determine the crops and types of farming.

Differences in frost hazard occur in small distances within an area, with resulting differences in the crops that may be profitably grown. It will pay to investigate carefully the frost and other hazards of any farm being considered for purchase.

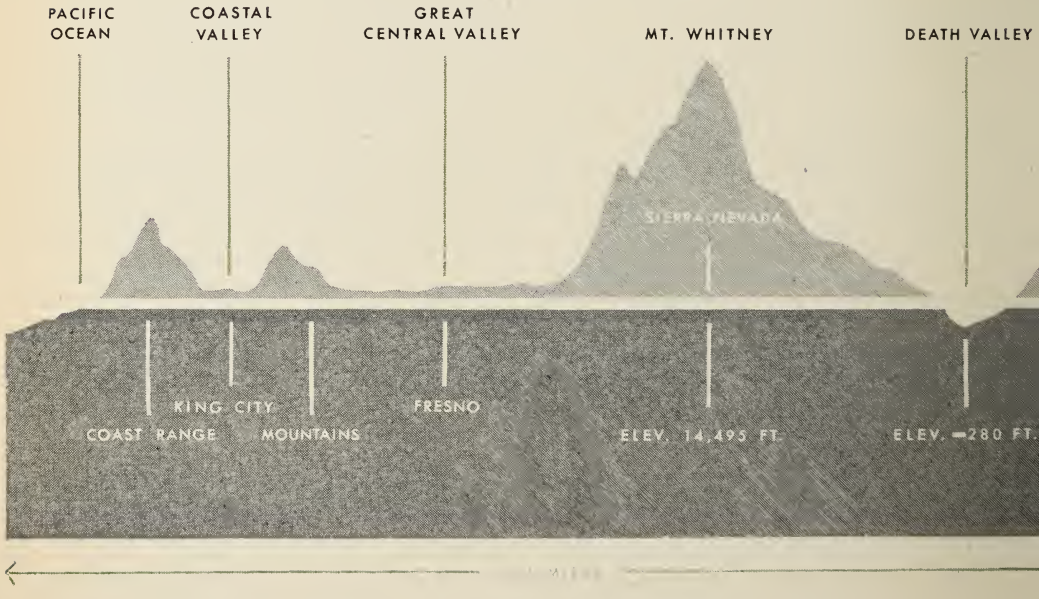
The climate in certain areas is doubtless more pleasant to some persons than to others; some prefer the hot, dry interior; others the cooler and more equable climate along the coast. Select a region for further investigation and trial on the basis either of climate or of kind and type of farming. To help in this choice, sample weather data have been prepared and presented in table 3 for typical stations in each of the major agricultural regions that appear on the map on page 18. If climate is important or would affect the family's health, it might be well to spend a year in the area selected before making a permanent choice.

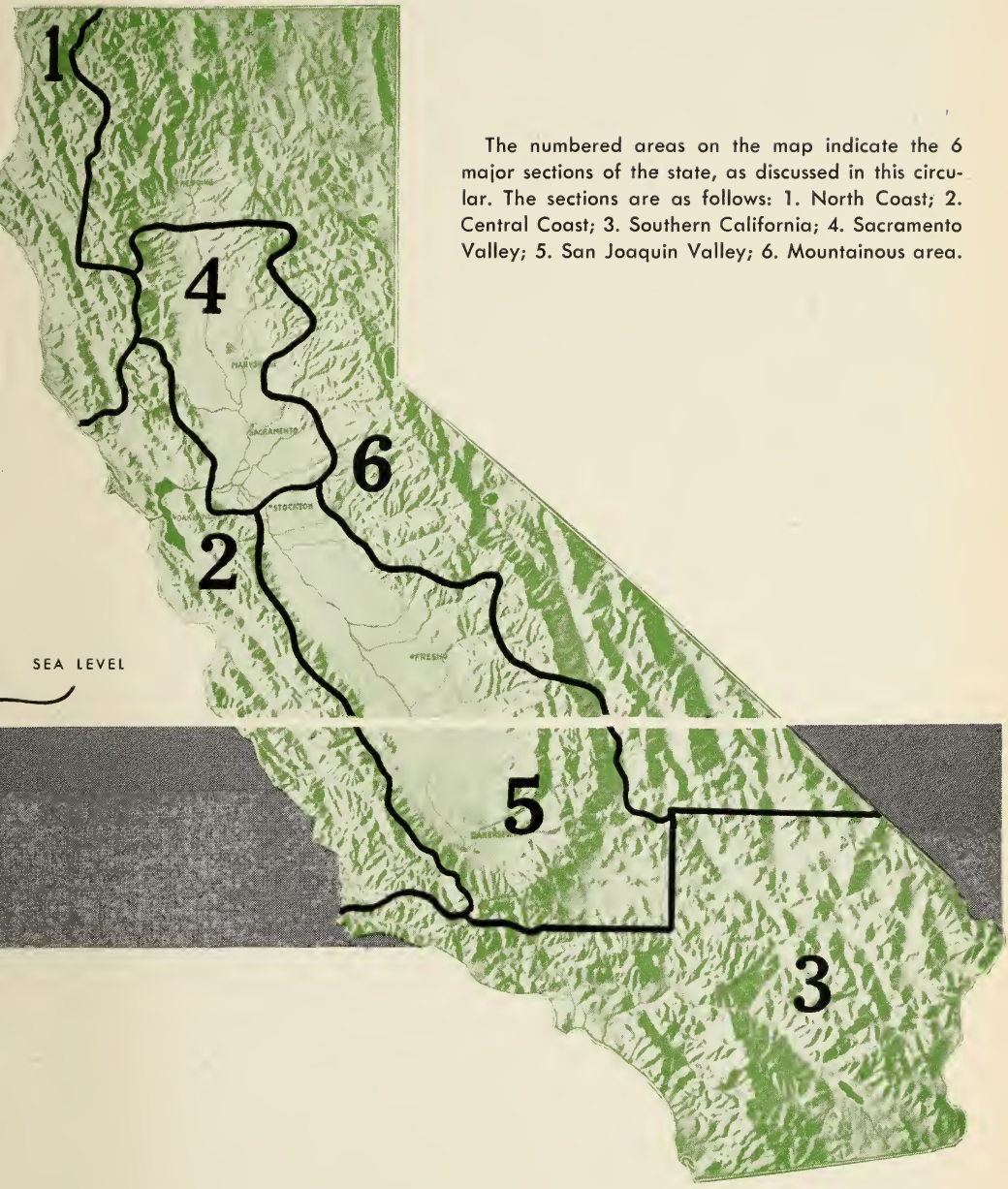
Rainfall is a vital climatic factor in California. The mean annual total precipitation varies from a low of 3 inches in the southeastern desert region to a high of well over 60 inches in the northwestern corner of the state. In most of the highly developed farming areas it

varies between 5 and 36 inches. It is largely concentrated in the winter months from November to March, so irrigation is necessary for most summer-growing vegetable, field, and fruit crops. Even where crops can be grown without irrigation it will pay in increased production if water can be obtained at a reasonable cost.

Temperature. California owes its importance as a producer of fruit and vegetable crops to the favorable temperatures in its agricultural areas. Several subtropicals, such as oranges, lemons, avocados, figs, olives, and dates, are grown in the warmer areas. Many deciduous fruits and vegetables are grown and marketed in seasons when not produced in quantities elsewhere.

Temperatures—that is, the relative warmth or coolness through the year, the length of the frost-free growing season and the minimum winter temperatures—determine the crops grown in an area. Too low winter temperatures will kill certain subtropical fruits, and lack of cold winters will prevent good production of certain deciduous varieties. The frost-free growing period varies from less than 100 days in parts of the mountain area to more than 350 days along the coast in the central and southern parts of the state. Summer temperatures also greatly affect the growth of crops and these temperatures vary widely from the cooler coastal exposures to the warmer central valley and hot desert.





The numbered areas on the map indicate the 6 major sections of the state, as discussed in this circular. The sections are as follows: 1. North Coast; 2. Central Coast; 3. Southern California; 4. Sacramento Valley; 5. San Joaquin Valley; 6. Mountainous area.

Table 3. Sample Weather Data from Some Major Agricultural Regions in California

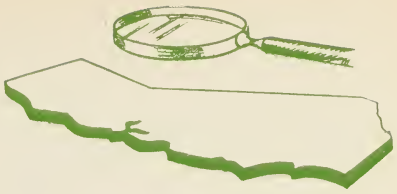
Region and weather station	Elevation	Average annual precipitation	Frost-free growing season	Temperatures				
				Jan. average	July average	Annual average	All time high	All time low
1. North Coast	feet	inches	days	°F	°F	°F	°F	°F
Eureka	43	39	277	47	56	52	85	20
Ukiah	650	36	208	45	72	58	114	12
2. Central Coast								
Santa Rosa	167	30	207	47	66	57	112	15
San Jose	95	14	299	48	67	58	106	20
Salinas	70	14	250	49	62	57	110	18
San Luis Obispo	300	21	320	52	64	58	110	20
3. Southern California								
Santa Ana	133	14	303	52	71	62	112	22
Riverside	900	11	265	52	76	63	118	19
San Diego	49	10	365	55	68	62	110	25
Imperial	–69	3	311	54	91	72	124	16
4. Sacramento Valley								
Red Bluff	350	24	274	45	82	62	115	17
Marysville	65	20	273	47	79	62	118	16
Davis, Sacramento	51	17	242	46	76	61	116	11
5. San Joaquin Valley								
Modesto	91	11	254	44	76	60	111	15
Fresno	331	10	295	46	82	63	115	17
Bakersfield	404	6	277	47	83	65	118	13
6. Mountain								
Alturas	4372	13	77	27	67	47	105	–32
Yreka	2631	17	141	34	72	52	112	–11

Soils—some are good, some are difficult:

The soils of California are exceedingly variable because of differences in parent material, method of formation, climate, age, and location. In method of formation there are two main types: (1) the residual soils in the hills and mountains, formed in place by decomposition of the underlying rock; (2) the transported soils in the valleys, built up of material deposited by rivers flowing down from the mountains on either side.

The upland, or residual soils are somewhat weathered and eroded. They are rather shallow—usually not more than three or four feet deep over bedrock. They occupy most of the Coast Range and slopes of the Sierra Nevada and other mountains. Because they are almost entirely on hillsides, where topography makes irrigation impracticable, and are too shallow or hazardous for dry farming, these soils are seldom used for crop production. Where rainfall is adequate they bear a good forest cover; elsewhere they support only brush or grass. Their main agricultural use is in the pasturing of range livestock for part of the year, from 5 to over 20 acres being needed to support a mature head of cattle for one year. Some of the foothill areas yield commercial crops of deciduous fruit when irrigated and properly managed.

The upland soils are generally unproductive and restricted in crop adaptations as compared with the valley soils. Because of the great area involved and the low value per acre, be cautious about buying an abandoned or partially developed upland farm. *Only a proven farm, in a locality that has an economic future under normal prices, would be a safe purchase on residual soils.*



Look soils over carefully.

Valley and terrace soils have been produced principally by erosion of the mountains and upland soils. They make up most of the farm lands of the state, the most extensive being the great interior valleys of the Sacramento and San Joaquin rivers and the southern California coastal plain from the seashore inland to Riverside and Redlands. There are, also, several large valleys in the coast counties, such as the Russian River, Santa Clara, Salinas (pronounced sal-ee′-nas), and Santa Maria valleys. Scattered throughout the state in the mountain, foothill, and desert areas are many other smaller valleys containing good soils washed down from the surrounding hills. These valleys contribute much to the agriculture of the region.

Valley soils, although fertile as a group, vary in productivity and desirability. Some are coarse and poor; others so heavy and hard to work as to be limited in use. The older ones often contain a layer of hardpan at depths varying from a few inches to a few feet. This is an impermeable layer formed by the cementing together of fine soil particles and salts, which, over the years, have been leached to the same depth by the limited seasonal rainfall. Root and moisture penetration are usually limited to the soil above the hardpan, thus impairing productivity and limiting the crops that can be grown.

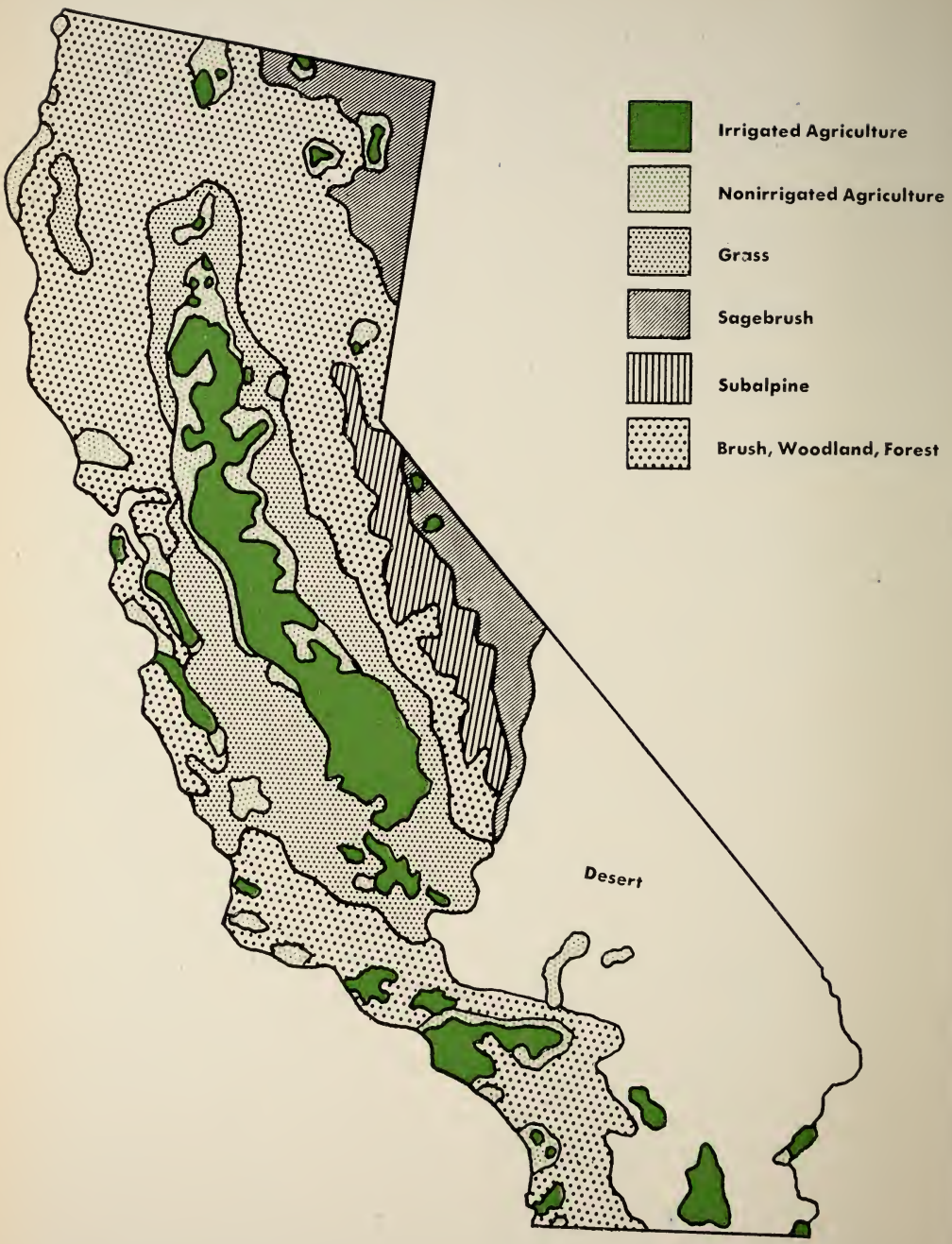
Some of the low-lying soils, where the water table is near the surface, have accumulated a concentration of salts called alkali. These salts may, in extreme cases, render the soils worthless or limit their use to a few alkali-tolerant crops or to saltgrass pasture. Drainage is a problem in some areas.

There are also older terrace soils, less friable and lower in fertility than the more recent flood-plain soils. Even the highly fertile bottom lands may vary in productivity through coarseness of texture and other factors. Along some of the watercourses flood hazard should also be considered.

Since the soil of the farm may limit future success, its nature, ease of handling, and productivity should be determined through actual inspection and local inquiry before a purchase is made.

Soil surveys. Many of the agricultural areas of California have been surveyed and mapped for soils by the University of California in cooperation with the United States Department of Agriculture. An individual farm may be located by its legal description on these maps, and the general character of its soil learned. For areas of less than 30 acres, these maps should be supplemented by field inspection, since small areas of different and perhaps poor soils cannot be shown on the scale of these maps.

Many of the area maps, with booklets describing soil series and textures, are no longer obtainable for free distribution, but may be seen in agricultural libraries of the University of California at Berkeley, Los Angeles, Davis, and Riverside, and at the county offices of the Agricultural Extension Service. Some of the counties have been covered by intensive land-use studies and mapped for recommended utilization, with detailed reports



This is a map showing the natural cover and land use in the state of California. In a map this small it is not possible to show all of the features of all of the land, hence only the main areas are shown. Many of the small, local, irrigated sections do not appear.

that may be consulted locally. Maps showing general land classes by quality or potential productive capacity may be studied at most of the local offices of the Agricultural Extension Service.

Irrigation is essential in most locations

California as a whole is a semiarid state. Most of the farming is in valleys receiving 20 inches or less of rainfall annually. Because this rainfall comes almost entirely during the cool winter months, intensive agriculture is highly dependent on summer irrigation. In 1954 some 84,500 farms (69 per cent of the total) reported irrigation, and 7,048,049 acres, or 53 percent of the cropland was irrigated. Nonirrigated farm land is devoted mainly to pasture or range and to small grains. Production of field, vegetable, and fruit crops without irrigation is somewhat limited.

Water, so essential to California agriculture, is often more precious than the land. Land with water is sometimes valued at over $2,000 an acre, whereas similar land without water would have little or no agricultural value. Look carefully to the adequacy, dependability, quality, legal rights, and cost of the water supply when buying an irrigated farm.

If you intend to farm in California, it will probably be on irrigated land and you will need to know or learn the economics and science of growing crops under irrigation. You will find that an income level made possible only by intensive crop production is usually necessary to cover the additional costs of irrigation.

Water for irrigation is obtained from streams, reservoirs, irrigation (district) canals, and pumped from irrigation wells. It is measured in units of flow (gallons per minute, cubic feet per second, miner's inch) or in units of volume—the acre-inch and the acre-foot. (An acre-inch is enough water to cover an acre 1 inch deep and is equivalent to an inch of rainfall on an acre.) The amount of water required for irrigation will vary widely by crop and area—from a depth of a few inches, where only one or two applications are needed, to as much as 10 feet in the date gardens of the desert. The cost per acre for the year varies from a few dollars up to $100 or more in rare cases, most frequently falling between $5 and $25 per acre.

THE FARMING REGIONS

for convenience, six are discussed in detail

Farm lands in California occur mainly in the large interior valleys with their bordering foothills, and on the seaward slopes of the Coast Range, but with mountains or distance separating them into areas. Natural barriers divide the state into several regions that vary in climate, topography, and soil, with resulting differences in local agriculture. A description of California agriculture is simplified if one considers the 6 major agricultural regions shown on the map on page 18, together with the sample weather data in table 3. (For statistics on these regions it has been necessary to have them conform to county lines rather than the more appropriate topographical boundaries.) Table 4 shows some statistics by regions.

Table 4. Farms and Acreages in Major Agricultural Regions of California From the 1954 Census of Agriculture

	1 North Coast	2 Central Coast	3 Southern California	4 Sacramento Valley	5 San Joaquin Valley	6 Mountain	Entire State of California
Land area, 1,000 acres	5,175	10,177	28,996	7,168	17,563	31,234	100,313
Area in farms, 1,000 acres	1,954	6,742	6,619	5,315	11,270	5,894	37,794
Total cropland, 1,000 acres	197	1,992	2,242	2,568	5,249	981	13,229
Land irrigated, 1,000 acres	34	461	1,208	1,137	3,725	483	7,048
Total population, 1950	118,173	2,850,789	5,652,249	584,577	1,135,581	244,854	10,586,223
Farm population, 1950	13,988	118,624	167,492	68,669	216,943	31,651	617,367
Number of farms	3,455	23,567	34,569	15,209	38,504	7,771	123,075
Average per farm:							
Total acres	566	286	191	349	293	758	307
Cropland, acres	57	85	65	169	136	126	107
Value, land and buildings	$35,608	$61,321	$65,681	$59,667	$62,759	$42,034	$60,127
Value, farm products sold and used	$6,059	$14,023	$19,925	$16,136	$23,807	$7,545	$18,370
Number of farms classified by major source of income							
Field crop	11	781	1,510	1,958	7,636	444	12,340
Vegetable	5	958	1,350	257	930	5	3,505
Fruit and nut	293	6,596	10,252	3,025	10,555	798	31,519
Dairy	725	1,379	1,105	1,973	6,855	413	12,450
Poultry	110	2,929	5,389	740	2,085	316	11,569
Other livestock	581	2,098	1,709	1,617	2,221	2,117	10,343
General, crop and livestock	24	605	1,299	876	2,194	333	5,331
Number of farms classified by economic class							
Class I, Products $25,000 or more	218	3,073	5,156	2,349	6,918	527	18,241
Class II, Products $10,000 to $24,999	520	3,451	5,000	2,219	8,034	966	20,190
Class III, Products $5,000 to $9,999	388	3,111	4,578	2,136	7,675	941	18,829
Class IV, V, VI, Products under $5,000	778	6,320	9,104	3,823	9,987	2,146	32,158
Total commercial farms	1,904	15,955	23,838	10,527	32,614	4,580	89,418
Part-time farms	577	2,971	4,749	1,957	2,646	1,221	14,121
Residential farms	982	4,552	5,882	2,717	3,208	1,968	19,309

THE NORTH COAST IS MOSTLY TIMBERED

This region comprises the three counties along the Pacific Ocean south of the Oregon line. It is largely occupied by the Coast Range, with elevations seldom exceeding 3,000 feet above sea level. The mountainous area is mostly covered with forest or brush, but includes considerable grazing land and many livestock ranches. Farming is largely limited to the valleys and a narrow shelf along certain portions of the coast.

This region of comparatively high average rainfall, ranging in different areas from 35 to 60 inches, has fairly early fall and late spring rains, but still a considerable dry period during the summer. Summer irrigation for crops and pasture is increasing.

The climate varies widely with elevation and distance from the coast. Along the shore and extending inland for a few miles is a belt which is cool, foggy, and windy, having mild, wet winters; the weather data given for Eureka in table 2 are typical. Farther inland, in the major farming valleys, there is less rainfall, the summer temperatures are higher and the winter temperatures lower than on the coast, as shown by the weather data for Ukiah.

Activities. Lumbering of coast redwood and Douglas fir is a major activity around Crescent City, Eureka, and Fort Bragg. Many of the ranches in this area also embrace commercial forests and derive a portion of their income from the sale of timber. This region contains the coast redwood belt and the famous Redwood Highway (part of U.S. Highway 101) which runs north from San Francisco through a large part of the farming and redwood country to Oregon.

Beef cattle and sheep ranches, depending largely on owned range, occupy most of the hill country that is open to grazing. Dairying is the major type of farming in the Smith River Valley of Del Norte County, the Mad and Eel river deltas in Humboldt County, and some of the coastal portions of Mendocino County. Farther inland in Mendocino County lies the Russian River Valley and adjoining agricultural areas, where prunes, pears, wine grapes, and hops are important crops.

Hops, a specialty crop, are grown in the Russian River area, and require expensive trellises to climb on.

Opportunities. The north coast region as a whole is fully developed agriculturally, with its crops and livestock stabilized. It contains about 197,000 acres of cropland. Although this is only 4 per cent of its area, practically all the good farming land is fully utilized. Some of it is under irrigation and an increase of this practice would increase production on existing farms rather than result in many new ones.

THE CENTRAL COAST—MORE FARMING, A MILD CLIMATE

This region comprises the counties on and near the coast from northern Sonoma County, about 80 miles north of San Francisco, to San Luis Obispo County, about 260 miles south. In general it is a little warmer and has less

rainfall than the north coast region. The climate is mild and equable near the ocean, but warm and dry farther inland. Although the Coast Range dominates the area, the region is somewhat lower and less rugged than the north coast. It contains more open grazing and farming land and less commercial timber.

Considerable livestock is produced on the ranges, most of which are privately owned. As a result of the lower rainfall and higher temperatures the green-feed period is somewhat shorter than farther north. With proper management, however, stock can be maintained on range the year around with a little supplemental feed—usually available from the crops and crop residues of the valley farm lands.

Activities. All the counties in this region contain important crop areas in the valleys and on some of the hill slopes. Grain and grain hay, with some other crops, are produced without irrigation, but irrigation from individually owned wells is used for intensive production of fruit, field, and vegetable crops.

The central coast region presents a wide range of conditions which lead to crop specialization. Sonoma and Marin counties, on the north, constitute an important dairy region producing market milk for the San Francisco Bay area. Petaluma in Sonoma County is the center of a large commercial poultry industry. The Sabastopol area is the main shipping center for Gravenstein apples and bush berries. The Napa Valley, farther east, produces wine grapes, prunes, and a variety of other crops. Lake County is an important pear and walnut district with a few dairy, livestock, and general farms.

The valleys in the San Francisco Bay area and the Santa Clara Valley, centering at San Jose, contain apricot, walnut, prune, almond, cherry and pear orchards, and wine grape vineyards, besides some plantings of field crops and vegetables. The Pajaro Valley (pronounced pa-há-ro), which surrounds the town of Watsonville, includes California's chief late-apple district and is also important for vegetable crops. The area around and south of San Francisco Bay is a great commercial flower-producing area, shipping cut blooms to much of the rest of the country.

All along the coast are areas that permit the production of cool climate crops such as lettuce, artichokes, peas, broccoli, and Brussels sprouts. The northern end of the Salinas Valley is famous for lettuce, carrots, and other vegetables, and has large acreages of beans, sugar beets, and other field crops. The warmer and drier southern end of this valley is devoted mainly to field crops and livestock. The Santa Maria and Santa Ynez valleys farther south are heavy producers of

Southern California's population is huge and still expanding. Here the edge of an urban community seems to be creeping down the hill, preparing to push out more farming.

vegetables and flower seed. In most of these vegetable areas double-cropping, that is, more than one crop a year, is possible with irrigation. Some dairying is scattered throughout the region, although this has declined in recent years. Poultry production is important in many localities.

Opportunities: This entire central coast region contains about 1,992,000 acres of cropland (20 per cent of its area). The valley soils are usually good and fully utilized with high-income crops. This region contains family-sized farms and large commercial farms and stock ranches, most of them well established and firmly held. Around the cities where additional employment opportunities are available there are many small and part time farms. Increasing quantities of good farm land are being engulfed by urban expansion.

SOUTHERN CALIFORNIA IS DIVERSIFIED—WARM

The southern quarter of California should really be considered as two areas—coastal and desert, but separate statistics are not available because several counties are in both climatic zones.

Coastal Zone

The southern California coastal zone is a strip of varying width between the mountains and the Pacific Ocean from Santa Barbara in the north to San Diego in the south. Included are a few coastal valleys that run inland up to about 75 miles. This area is warmer and has a lower average annual rainfall than the central coastal region. Because of the generally mild, equable climate and certain small, almost frost-free areas, it is possible to produce several subtropical fruits as well as a wide range of vegetables and flowers. Some field crops are produced, but the chief crops are lemons, oranges, avocados, walnuts and a large variety of vegetables.

The generally dry and brush-covered hills are used principally for recreation, scenery, and as watersheds with grazing rather limited. Except for some dry-farming of grain and beans, irrigation is necessary for most crops. All locally available irrigation water is fully utilized and additional water is being brought in from the Colorado River at relatively high cost.

Near Los Angeles there is an area unique in that it is zoned for large scale dairy operations, the cows being kept in corrals and fed entirely on alfalfa hay and concentrates shipped in from other areas. Replacement animals are usually obtained from other areas, many from other states. This industry is large and highly efficient. The production per cow is extremely high.

The perimeter of Los Angeles also supports a large poultry industry. In recent years local egg production has tended to keep up with or exceed the demands of the huge and growing local population. Although large quantities of local poultry are marketed, supplies are still shipped in from other areas.

The most significant factor in this area is the tremendous and still growing population. This coastal zone, which includes Los Angeles and adjacent towns, had over five million inhabitants in 1950 and immigration into this area still continues. The already enormous loss of land to industrial and residential uses is expected to continue. Although the present value of the agricultural output of the area is still high, much production is already being carried on a year-to-year basis pending an opportunity to sell the land for other purposes. Agriculture will decline but some intensive types will persist.

Opportunities: Land values are among the highest in the United States, bare land costing from $500 to $5,000 an acre, with citrus orchards as high as $8,000 per acre. While such prices may have resulted in part from some high-profit crops, they are mainly due to the

This dairy in the center of Glendale brings in all of its feed from the surrounding area. The cows never tread on a blade of grass from the time they are old enough to produce milk. (Photo courtesy Roger Jessup Dairy.)

Water is the key to farming in the desert. The main agricultural advantage in this area is the earliness of many crops which enables the growers to get out-of-season prices in eastern markets.

increased residential and industrial demands and to anticipated speculative possibilities. They are seldom justified on the basis of probable agricultural earnings from usual agricultural crops. Nor is any appreciable quantity of new land likely to be made usable for farming even with increased supplies of water.

There are, however, many small places and part-time farms which offer opportunities for pleasant homes, some food production, and limited farm earnings to supplement other income. *Purchasers of such places should be assured of an adequate outside income.* Large-scale commercial farming opportunities are few and far between. They are limited to the purchase of existing farms or parts of large farms at a high capital outlay in proportion to earning power.

Desert zone

The vast interior of southern California is largely desert and dry, rugged mountains. Rainfall is too low and uncertain for dry farming, timber production, or much grazing. Farming is possible only in the few irrigated valleys or in small areas where water is pumped from wells. Water, not land, is the limiting factor. High temperatures and mild winters, in those locations where irrigation water is available, are conducive to a diversified and highly profitable agriculture based on fruit and vegetable crops marketed at seasons of the year when there is less competition from other areas.

The Imperial Valley is the largest and most important agricultural area in this desert region. It has a dependable water supply from the Colorado River, made possible by the Hoover Dam and the All-American Canal. Most of the district acreage is in field crops—alfalfa, barley and grain sorghums, sugar beets, flaxseed and cotton. It is also an important source of lettuce, carrots, cantaloupes, tomatoes, and watermelons when these are not available elsewhere. Fruit acreage is small and unimportant, composed mostly of citrus fruits with some grapes and dates.

During the winter months large numbers of lambs and cattle are fed here on pastures, crop residues, and in feedlots while enroute from other states to the Los Angeles area. Market milk is produced for local use, but dairying has declined in recent years. Some replacement heifers are grown for the Los Angeles area.

All irrigable land for which water is available is privately owned and utilized. No further development is anticipated.

The Coachella Valley, north of the Salton Sea, is similar to the Imperial Valley. Formerly part of the valley was irrigated from wells, but the completion and extension of the All-American Canal brought irrigation to most of the land suited to farming. Citrus fruits, grapes, dates and some early vegetables are most important here. Water is being extended, with about 48,000 acres being farmed out of a potential of 75,000 to 100,000. Most of the land is privately owned. A farm would have to be obtained by the purchase of an existing farm or by buying and developing raw land.

The Palo Verde Valley, lying along the Colorado River at the eastern boundary of Riverside County, resembles the Imperial Valley in climate and agriculture. Vegetables, alfalfa, and cotton are the main crops. Water supplied by gravity from the Colorado River is dependable in quantity and low in cost. Out of a total of 100,000 acres about 75,000 are under cultivation.

Other Desert Areas. The Antelope Valley in the northeastern part of Los Angeles County has some farm land irrigated from wells and much more potential farm land presently undeveloped because of the insufficient, and in fact diminishing, underground supplies. There has been considerable development in poultry and egg production in recent years.

The Mojave Valley over the mountains from San Bernardino contains some farming dependent on water pumped from wells. While some underground water has been found in several small, scattered areas, there are also many desert ranches with poor earning capacity because of insufficient water. They may *look* promising in good years.

The desert is dotted with the remains of previous failures—a silent warning to the newcomer.

The desert contains much good land which cannot be developed because of lack of water. It contains some mineral resources as well as recreation and health resorts. It is hot and dry in summer, but pleasant in winter and there has been considerable development recently in small residential plots.

Farming in the desert presents many problems and calls for special techniques. Those interested should read Circular 464, "California Desert Agriculture."

THE SACRAMENTO VALLEY A GENERAL FARMING AREA

The Sacramento Valley is the northern half of what is called the Great Valley. With less heat and more rainfall, its crops are somewhat different from those of the San Joaquin Valley with which it merges in the delta of the two great rivers. Rainfall in and around the Sacramento Valley ranges from 15 to 35 inches. Irrigation is needed for most orchard and field crops, but not for the grain grown during the rainy season. The watershed yields more water than is needed for summer irrigation, and the recently completed Central Valley Project, stores and transfers part of this water to the San Joaquin Valley. Additional projects are contemplated to store more water and supply it where needed.

The climate of the Sacramento Valley is less equable than that of the coastal regions; summers are hotter and drier and winters are colder. The soils are variable, with some excellent fruit soils, some hardpan land, and some fine-textured, basin soils. The basin soils produce heavy yields of rice and grain, but are adapted to fewer crops than the medium-textured, alluvial soils along the many streams that enter the valley.

Activities. The region is largely devoted to field crops and general farming, with some dairying. It also contains several important fruit districts producing peaches, prunes, almonds, pears, walnuts, olives, and even a little citrus fruit. Commercial poultry farms are found in several localities, especially around Sacramento.

Over half the land harvested in the region is in grain and grain hay. This area contains most of the rice fields of California and is well suited to the production of rice by efficient, large-scale mechanization. Alfalfa, sugar beets, dry beans, and canning tomatoes are other important crops. The delta of the Sacramento and San Joaquin rivers is devoted to large commercial farming. In this huge acreage protected by levees a variety of vegetables and field crops are grown in the very fertile, friable peat soil.

Both cattle and sheep are wintered in the Sacramento Valley area and pastured on nearby private ranges and in national forests in the mountains during the summer. Some stock remains in the valley the year around, utilizing the numerous irrigated pastures and crop residues such as grain stubble and sugar beet tops. Dairying is increasingly important.

Opportunities. The Sacramento Valley, comprising the arable valley floor and some foothills to the east and west, is an extensive region. Thirty-six percent of this area (2,568,000 acres) is cropland, all privately owned and utilized. Opportunities still exist in terms of better utilization, increased production, and in developing new farms. Some good cropland where grain is dry-farmed could be devoted to general or dairy farming

if irrigated. Water can be made available for all good land, but the newcomer is warned of much poor soil on which many crops cannot be grown profitably.

In the eastern foothills some general and fruit farming is done commercially. There are many other small farms which, because of the agreeable climate at altitudes of 1,000 to 3,000 feet, make attractive homes for those who have outside income.

Planting asparagus in the delta area of the San Joaquin. This soil is so "peaty" it will burn and smoking is forbidden in many places.

THE SAN JOAQUIN VALLEY, LARGEST AND MOST VERSATILE

This region extends southeast, from the delta area where it joins the Sacramento Valley, to the Tehachapi Mountains which separate it from southern California. It is bounded on the east by the Sierra Nevada which provide most of its irrigation water, and on the west by the dry side of the Coast Range. The average rainfall is as much as 20 inches in the north, less than 10 inches in the south; it is higher along the eastern side than on the west. Its climate is a little warmer than that of the Sacramento Valley and provides a generally longer growing season, giving it a greater variety of crops. The soils are variable; much land is of high quality, but there are some shallow soils over hardpan and some low basin lands where alkali is a limiting factor.

Activities. This is the largest agricultural region in California, containing 5,249,000 acres of cropland (30 per cent of the area). This cropland acreage is 39 per cent of the total for the state. The San Joaquin Valley presents a great diversity of products and types of farms but with specialization in local areas.

Over 70 per cent of the grapes in California—most of the raisin and table grapes and some of the wine grapes—are

Planting some of California's valuable cotton crop. This photo was taken in the San Joaquin Valley which produces most of the state's cotton.

grown here. Peaches, apricots, walnuts, almonds, plums, figs, and olives are important. In the southeastern part of the valley is a large and growing citrus area producing navel oranges and some Valencia oranges and a few lemons.

Field crops, however, occupy most of the land—cotton, alfalfa, grain, beans, potatoes, and sugar beets. The major part of California's cotton acreage is in the southern counties of this valley. Cotton exceeds all other California crops in value with over $300 million worth of lint and seed annually. Many vegetable crops such as asparagus, tomatoes, melons, onions, sweet potatoes, and peas are grown in areas of specialization scattered through the entire valley.

Considerable cattle and sheep are produced in and around the valley. Many cattle are finished for slaughter on locally grown forages, grains, and by-products in the numerous large feed lots. This valley is the largest dairy region of the state—producing market milk for local centers and shipment to Los Angeles and San Francisco, and considerable for the manufacture of dairy products in the northern counties. Poultry production is scattered through the area and trukey production is a big business here.

Opportunities. Practically all the land that has sufficient water is farmed to irrigated crops. Part of the valley is irrigated by water stored in reservoirs and delivered by old irrigation districts with plentiful supplies at very reasonable costs. In some districts delivered water must be supplemented with water pumped from wells or imported and purchased at higher costs. Much recent development has been by pumping from wells that draw on a diminishing supply with rising pumping costs.

The Delta-Mendota Canal (part of the Central Valley Project), bringing water down from the Sacramento River, plus water storage and diversion from Friant Dam have increased the water supply considerably. The Pine Flat Dam on the Kings River and other recent projects have also improved the water situation. These, together with other developments and deep irrigation wells (some to almost a mile) have resulted in an increase of over a million acres of cropland during the last 10 years. But more water is needed to replace the dwindling underground supplies and to develop even more land. Additional imports of water are contemplated under the California Water Plan.

Because of planned water development and because of changes from extensive crops and pastures to more intensive, high-value crops, this area offers more agricultural opportunities and can probably absorb more new farmers than any other section of the state. Many typical family-size farms in the earlier settled areas change hands from time to time. Much larger farms with high capital investments are more typical of the recent developments in the areas with higher-cost water.

THE MOUNTAIN REGION HAS MOSTLY LIVESTOCK AND FEED

The northeastern part of the state is dominated by the Siskiyou Mountains, Cascade Range, and Sierra Nevada. Its agricultural importance is small, with only 981,000 acres (3 per cent of its area) in cropland. Farming is confined to mountain valleys at elevations between 2,000 and 6,000 feet. Statistics in table 4, however, include western parts of a few counties that extend down into the foothills just east of the Great Valley.

The frost-free growing season is relatively short as compared with the rest of the state. It is cold in winter and moderately warm in summer with low annual rainfall in many of the farming areas. It has a climate that resembles the intermountain states rather than the rest of California.

Farming in the mountain region consists largely of hay and grain production for wintering and feeding range live-

stock. Cattle and sheep are grazed by permit in the national forests and on grazing lands of the public domain. Such grazing rights are regulated and made available to the established ranchers in proportion to their ranch operations. The public ranges, as well as those privately owned, are fully utilized. To obtain grazing rights the newcomer would have to buy or rent an established ranch.

The farming areas in this mountain region are across rather high mountains from the Sacramento Valley and hence have different climatic, price, and market conditions. Wild meadow hay, alfalfa, and grain are the major crops. Irrigation is necessary for crop production in most areas, but in some localities there is not sufficient water for all the arable land. Livestock production leads, with some dairying and some cash field crops. The sale of timber provides an occasional source of additional income.

The region of Tule Lake, just south of the Oregon line in Siskiyou and Modoc counties, is a relatively new and highly productive farming area. It is a part of the Klamath Project recently developed by the U.S. Bureau of Reclamation.

Homesteading of drained and irrigated land by veterans (who have preference) is currently complete. Grain, alfalfa, clover seed, and potatoes are the main crops.

Lassen, Yosemite, Kings River Canyon, and Sequoia national parks—with most of the high mountain scenic and recreational areas of the state—are in this region. Nearly all the high mountain country not in national parks is in national forests and provides not only grazing but recreation.

The region contains 62 per cent of California's commercial forest acreage, and considerable mineral resources. It supplies much of the state's hydroelectric power and most of the irrigation water for the Great Valley. Hence, in some of the mountain valleys local jobs may sometimes be combined with a small farm or rural home for a better living. Since the region is fully developed agriculturally, opportunities for new farms and ranches are limited.

THE TYPES OF FARMS

from almonds to zucchini—some are specialized, some not

California farms may be roughly classified according to the principal crops or livestock from which the major income is derived. Each crop or kind of livestock is called an enterprise. A farm business is composed of one or more enterprises. A specialized farm will have only one or two; a diversified farm, several. Although California agriculture as a whole is highly diversified, most of its farms specialize in the products best adapted to local conditions. Table 4 contains a classification of California farms according to major source of income by regions, and for the state as a whole.

FRUIT FARMS—The most numerous

Farms whose major crop is fruit or nuts exceed any other type in California. They vary widely in the kind of fruits grown. They range in size from small, part-time farms all the way to 3,000 acres. Most are between 10 and 80 acres.

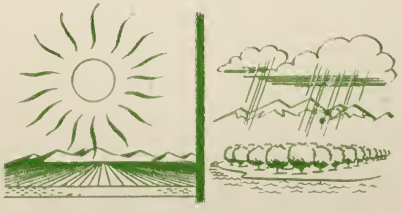
Fruit production requires a large investment for developing the orchard or vineyard; hence the operator must make

a high capital investment for a farm large enough to support his family.

Orchards and vineyards are usually specialized, growing only one kind of fruit or at most a few kinds and varieties. The result is a highly seasonal labor requirement at harvest season—as many as 10 workers being needed to pick the fruit from an orchard one man can care for the rest of the year. Some risk is involved in specializing in a single fruit crop that cannot be changed. A frost or market glut may bring a year of little or no net income, and sometimes several years of low prices and income due to continued overproduction. In general, however, average net earnings per acre from fruit are good compared with those from other products.

Although prevailing prices for most fruits have been satisfactory over the years, there have been times when low prices have resulted from continuing surpluses. But as acreage declines demand increases to the point where planting of that fruit is again profitable. There is always danger in overplanting a profitable variety, of a change in consumer preferences or of loss of an export outlet. It takes five to ten years to bring an orchard into commercial bearing, so one planted now might not be as profitable when it comes into production as the current situation would appear to justify. The long-term outlook for a fruit is an important consideration when buying or planting an orchard.

Once planted and brought to maturity, an orchard or vineyard usually continues to produce for its normal life of 25 to 100 years, according to its kind. Hence, the total acreage of any fruit tends to be stable and, with new plantings known, normal average production may be forecast for several years ahead. A comparison of probable future production with profitable domestic and foreign demand, in the light of past supply and price relationships, permits a fair estimate of future prices.



Climate may determine the crop.

From time to time the prospects for some California fruits are better than for others. Many factors, including consumer habits, foreign outlets, tree removals, and new plantings, are too uncertain to warrant the inclusion here of any forecasts for the many fresh, canned, and dried fruits and nuts produced in California. Such information will be available at Agricultural Extension offices as it becomes known. Before buying or developing an orchard or vineyard, the prospective grower should make inquiries about the outlook for that fruit, present outlets, and local handicaps or advantages.

The citrus fruits. Navel and Valencia oranges, lemons, and grapefruit—are the most important measured in value and in the number of growers. *Lemons*, the most susceptible to frost damage, are grown in limited areas along valley terraces and near the ocean. *Navel oranges*, harvested in winter and early spring, are more widely grown in the warmer parts of the south coast region and in the southeastern San Joaquin Valley. *Valencia oranges*, the summer variety, are also produced in many places, but most extensively in Orange County and other mild coastal areas. *Grapefruit* are grown commercially in the hotter parts of the south coast region and in the Coachella and Imperial valleys. For this reason most citrus orchards specialize in a single variety, although in some regions two, three, or even all four varieties may be found on a single farm.

Although a minimum of around 20 acres of citrus orchard is required to furnish an adequate family income over

the years, there are many smaller orchards, probably due to the high cost per acre and also in part to the adaptability of citrus to part-time farming. Good bearing orchards usually cost $3,000 to $5,000 per acre, depending on current earnings and general economic conditions. The minimum capital investment for an adequate family orchard would probably be $60,000.

Deciduous fruits are those that shed their leaves and become dormant during the winter, in contrast to citrus, olive, and avocado, which are in leaf all year. Deciduous fruits are produced in regions with colder winters. Many varieties *require* some cold winter weather.

Peaches, pears, apricots, prunes, plums, cherries, apples, almonds, and walnuts are extensively grown in the favorable localities. The minimum size for a family farm may be from 20 to 30 acres on irrigated, productive valley land, but should be somewhat larger on poorer land without irrigation.

Good bearing orchards cost about $2,000 an acre and up; but there is considerable variation with locality and kind of fruit, because of current earnings and future outlook. In general, an adequate family-sized deciduous fruit farm would cost from $50,000 up.

Vineyards. Three principal types of grapes have been planted extensively in California—raisin, table, and wine. Each type and sometimes each variety is grown in those areas best suited to it. Raisin grapes, particularly the Thompson Seedless (Sultanina) variety, which are sold to some extent for table use, are widely produced in the San Joaquin Valley, where long, warm, dry summers develop the sugar and facilitate sun-drying. The major area of table grape production is also in the San Joaquin Valley, but in subareas of special adaptation—for example, the Flame Tokay around Lodi, and the Emperor in Tulare County. There has been a considerable increase recently in Thompson Seedless and other varieties of early table grapes in the Coachella Valley. Both table and raisin grapes are used in wine making along with the special wine varieties—particularly for dessert wines and brandy. Grapes for table wine are produced in many areas but are considered best in the valleys of the central coast region.

The minimum size of vineyard for a family farm varies by kind of grape and location. It may be as low as 25 acres in the best table grape areas. With raisin grapes, 40 to 50 acres would be required; with nonirrigated wine grapes, up to 60 or 80 acres. Price per acre varies, but the capital required for an adequate farm would probably be about $60,000.

Minor fruits. There are several other types of fruit farms in California, each more or less limited to a particular area or set of conditions. *Avocados* are produced in small, frost-free areas in the south coast region. *Olives* are grown in many of the warmer interior districts, especially around Oroville and Corning in the Sacramento Valley and Lindsay in the San Joaquin Valley. *Figs* are produced mainly in Fresno, Merced, and Tulare counties in the San Joaquin Valley. Such farms require 20 acres or more for an adequate unit. *Dates* are found only in the Coachella and Imperial valleys. *Strawberries* and *bush berries* are grown in several areas of the state in both small and rather large plantings.

FIELD CROPS—some are irrigated, some dry-farmed

Field crop farms are of two main types—nonirrigated grain farms and irrigated farms producing, for example, rice, cotton, or alfalfa. In California barley, wheat, and oats are grown largely on nonirrigated land or under conditions unsuited to higher-value crops.

Grain and grain hay are planted from late fall to early spring in order to take advantage of winter rains, and are harvested in the dry summer. In some areas land is summer-fallowed for a year,

a single crop being obtained once in two years, or from one to two crops in three years. Grain farms are usually specialized, but some growers also keep sheep or cattle to utilize the stubble and pasture. Some grain is grown under irrigation on otherwise idle land or in rotation with irrigated field crops such as cotton and alfalfa in the San Joaquin and Imperial valleys.

Grain farmers tend to large operations because full use must be made of the large, expensive equipment needed. A competent man with several thousand dollars' worth of equipment and a good local reputation can usually rent enough otherwise idle land for a commercial business of minimum size. From 200 to 300 crop acres are usually needed—double this in land where it takes two years to make a crop.

Rice farming is limited to fine-textured basin soils, principally in the Sacramento Valley where the land may be economically flooded during the summer growing period. Rice land occasionally needs rest or rotation and as rice and grain are similar in the type of farming and in equipment needed, the two are sometimes combined. Acreage of crop for a family farm can be smaller with rice than with grain.

Rice in a Sacramento Valley warehouse is handled with mechanized equipment.

Other field crops are widely grown on irrigated land in suitable local combinations rather than as single crops repeated year after year on the same farm. Chief among these are alfalfa, cotton, sugar beets, dry beans, certain vegetables such as melons, tomatoes, onions, potatoes, and sweet potatoes. This type of farming is common in the San Joaquin, Sacramento, Imperial, and Salinas valleys, but the crops selected vary for the different areas. A minimum of 80 acres of good irrigated cropland is considered necessary, and conditions which call for crop rotation and heavy equipment may require as much as 300 acres for a sound commercial unit.

The value of such land varies widely according to location and soil quality. It now costs from $500 to $1,000 per acre without improvements or equipment. An adequate farm with buildings and equipment could probably be secured for about $80,000.

It should be borne in mind that with crop farming many variations are possible, including beef or dairy cattle, sheep, or hogs as supplemental enterprises.

POULTRY raising is usually specialized

In California poultry is usually raised on small specialized farms where all feed is purchased, or where poultry raising is combined with some nonrelated enterprise. The land recommended for a family enterprise of 2,000 to 4,000 hens is small—2 to 5 acres. Its quality is unimportant, but good drainage is essential. It is an advantage if it is located not too far from a source of feed and a market for eggs and poultry. It is better not to be in the path of a city whose growth might create the danger of having to move in a few years.

Enterprise-management studies conducted by the Agricultural Extension Service over the last ten years show the net farm income of the competent poul-

tryman to have averaged a little over $2.46 per hen annually, with a high of $3.33 in 1951 and a low of $1.03 in 1954. Net farm income is the amount by which income exceeds cash costs and depreciation, but not interest on the investment and the value of the operator's labor. The prospective poultryman may reasonably count on making an average of about $2 per hen for living and debt retirement. He may estimate the size of business needed on this basis and decide whether he needs 1,500 or 4,200, or some other number of hens to support his family.

The capital invested, including the stock, averages about $8 per hen, but new construction would cost more. The land, buildings, equipment, and operator's dwelling for a 2,000-hen farm may cost as little as $25,000, but since it would take some months and another $6,000 or more of operating capital to stock with baby chicks and bring them to production, the total capital required will usually be over $30,000.

Poultry farming in general involves constant, but not arduous, manual labor and offers gainful employment to some with physical handicaps. It may be readily combined on a limited scale with other enterprises. For example, a 10-acre orchard and 1,000 hens should make an adequate family unit, with some advantages over a specialized single-enterprise unit of either.

In several parts of the state, turkeys and turkey eggs for hatching are produced on specialized farms. California is a leading turkey-producing state.

DAIRY FARMS are getting larger

Dairying is an extensive and important industry in California. Most milk is produced on specialized dairy farms, usually with forage crops and pasture maintained only for the dairy herd. There are also many dairies where a large number of cows are kept in a small area and fed on purchased hay and concentrates. This kind of dairying is common around Los Angeles and is increasing in other metropolitan areas.

In 1957, 76 per cent of the milk produced was Grade-A or market milk. Because the price of market milk is regulated by a state agency it returns a higher profit than milk for the manufacture of dairy products despite the costs of higher sanitation and quality requirements. The trend is for market milk production to increase as fast as market outlets are available, and milk production for other dairy products to decline in quantity and per cent of the total.

Dairying varies considerably in agricultural areas of the state according to differences in local market outlets and field crops produced. In some of the coast counties where there is little irrigation natural pasture is the main feed for part of the year, supplemented by locally grown hay and silage, and hay purchased from other areas. Most of the production in the Central Coast area is market milk. In the north coast area with its longer pasture season, especially around Eureka, manufacturing milk predominates.

In the irrigated interior valley dairy

This "nursery" in southern California takes day-old calves, raises them to producing age, returns them to the owner—all for a fee, of course.

enterprises are frequently associated with alfalfa, irrigated pasture, and sometimes silage production. For a herd of dairy cows, including the usual proportion of young stock, forage requirements can generally be met on from one and one-half to two acres of land per cow. It is not uncommon for a dairy herd to outgrow the forage potential of a farm, making it necessary for feed to be purchased elsewhere.

The small dairy farm intended to provide employment and an adequate living for a man and his family can be successful only in areas where costs of growing the feed are low enough for the production of manufacturing milk at a profit or where an outlet is available for market milk in this small a quantity. Where both pasture and hay are produced on the farm, from 20 to 30 cows and from 50 to 60 acres of irrigated land would be about the minimum needed for a commercial unit. With pasture only, and hay purchased, from 30 to 40 cows on 50 acres would be enough. On nonirrigated farms more land is required to produce the forage. Such a small dairy farm will involve a total capital investment of around $55,000 for land, buildings, equipment, dairy stock and a dwelling.

Although market milk production with its higher price would be more profitable on a small farm, it is more difficult to secure an outlet for small quantities of milk. The larger investment for an approved milking barn, milk cooling facilities, and bulk tank usually result in a minimum size of around 60 cows for the grade A dairy. A new dairyman may have to start selling manufacturing milk until he can obtain a grade A contract or, if he has adequate capital, purchase a going grade A dairy and obtain its contract.

Market milk or grade A dairies tend to be larger, and are increasing in size. The minimum successful commercial unit seems to be around 50 or 60 cows, which provides full time employment for one man milking and another in farm work in irrigating and producing the forage, except in the corral dairy where all feed is purchased. Such a two-man farm, where some or all of the forage is produced, involves an investment of around $140,000 with land, grade A barns, and equipment.

Most grade A dairies are now larger, with over 100 cows. Where forage is produced an investment of about $2,300 per cow for land, buildings, and equipment is needed. It will take an investment of about $600 or more per cow for a corral dairy where all feed is purchased.

Some dairy farms are rented to tenants who own the cows and movable equipment only. Rents are usually paid in cash each month—a flat amount, or the value of a certain quantity of milk, or rarely, a share of the milk. Renting requires an investment of about $500 per cow for the production of manufacturing milk or $600 for Grade-A milk, so by renting a limited capital will provide for a larger herd than would be possible at the $2,000 to $2,300 per cow needed where ownership is contemplated. To earn the same total income the renter will need more cows.

Circular 417 "Dairy Farm Management" provides the prospective dairyman with a more detailed discussion of all facets of this industry, with special emphasis on investment data and sample budgets of operating costs. This circular, together with supplementary leaflets and local data, may be obtained from any Agricultural Extension Office.

LIVESTOCK ranches take large investments

There are two main types of livestock farms in California—the range-stock ranch, and the general farm where livestock are raised or fed in connection with crop production. Much of the privately owned land, as tabulated by the Census of Agriculture, is in natural pasture or range; some additional public

land is used for grazing the stock—mostly beef cattle and sheep.

Grazing in the national forest and public domain is controlled by permits or allotments granted to divide the available range among the various ranchers according to their needs and past operations. The range resources of California are fully utilized and the newcomer must purchase or rent an existing ranch. The natural growth of grass in California is seasonal and because the forage in any area is of adequate quality for only part of the year, range livestock must be moved to different areas or must receive supplemental feeds.

Cattle and sheep operations vary with the kind of range and supplemental feed available. Some ranchers operate breeding herds and sell feeder calves, steers, or lambs. Others, on better ranges, can market fat lambs or fleshy feeders. Still others have supplemental feeds for finishing the stock raised and hence can sell good or choice animals for immediate slaughter. Some ranchers on seasonal ranges, as in the Coast Range, buy feeder calves or yearlings each year for further development on their ranges, and sell them at the end of the pasture season.

Cattle ranches also vary widely by location and kind, in the size of herd, and the acreage required for an adequate family farm. Usually a herd of 100 breeding cows, a total of 175 animal units (mature cattle equivalents) is considered necessary, with sufficient owned or rented range land, and enough cropland to produce the hay required for supplementing the range. Where all land is owned, as in the Coast Range, 1,500 to 5,000 acres are required for a herd of this size with an investment of at least $60,000 for the range alone. Even in the mountain region, where grazing rights on public lands are available to ranchers, the total investment for a stock ranch is rather high, since hay land and private range are also required. The land, buildings, equipment, and livestock would mean a minimum investment of $80,000 to $100,000 for a cattle business large enough for fairly adequate net income for a single family. In fact, cattle ranches are usually larger than this minimum and firmly held by prosperous owners, so that there is little opportunity for the newcomer with limited capital.

Sheep ranches need much the same acreage as cattle ranches for a family farm, but need 400 to 1,000 breeding ewes. Sheep are better suited to some of

Some cattlemen build their own feed lots and finish cattle. In some cases they even raise their own feed.

the seasonal ranges because of the lower feed requirement for the flock after the lambs are sold at the end of the best pasture season.

Recent studies of income and costs on a few typical sheep ranches in the north coast counties show a net income potential of about $10 per ewe, with a total investment of around $120 per ewe in land, buildings, equipment, and sheep. Under these conditions, to make $5,000 a year would call for about 500 ewes and an investment of $60,000, plus a dwelling. There are many smaller flocks on part-time farms or on general farms with several crops and kinds of land.

Livestock on farms. Livestock production and feeding are sometimes done on diversified farms in the valleys. Cattle, sheep, and occasionally hogs are raised to utilize surplus grain, grain stubble, and other crop residues. Beef steers and lambs from the ranges are fattened in irrigated pastures and on other crops and are fed in feed lots.

Swine. California now produces less than a fifth of the pork consumed in the state. Hog production is considered profitable here only where pasture, garbage, or some by-product or crop residue is available to keep the cost below that of grain alone.

In general, livestock production on irrigated pasture is less profitable than dairying or the growing of field, vegetable, or fruit crops. Irrigated land will be devoted to pasture largely where there is no more profitable way to use the land, or where, in diversified farming, it makes for better utilization of other crops or natural pastures and range, or is used in rotations to improve fertility. There are over 700,000 acres of irrigated pasture in the state now, and this is increasing. A family-sized, diversified crop and livestock farm on irrigated land may require 100 acres and an investment of $45,000 to $60,000, plus additional capital for livestock and equipment. Such a unit appears well suited for some of the new lands that may be brought under irrigation in the Great Valley, and that are less well-adapted to the higher-value row crops. It would have the advantages of diversification—namely, several sources of income, fuller utilization of crop residues, better maintenance of soil fertility, and a more stable labor requirement throughout the year. No standard organization can be recommended. The acres of each crop and of irrigated pasture will differ with the locality, and the kind of livestock will vary with the crops and according to the preferences of the operator.

VEGETABLE farming is very highly specialized

California is a great vegetable-producing state. Within the last 30 years it has developed distant markets for large volumes of head lettuce, carrots, asparagus, tomatoes, cauliflower, Brussels sprouts, snap beans, melons, artichokes, and other vegetable crops. High quality and time of marketing have made this possible. Production in any area tends to be on a large scale, with specialization in a few locally adapted crops for carlot or truckload shipment to distant markets or for processing in local freezing plants or canneries.

Most vegetable farms resemble the irrigated field crop farms already discussed, with large-scale commercial operations, rather than family farms, dominating the field. Many of the vegetables for eastern shipment are produced by grower-shippers who also operate large, efficient packing houses and do their own marketing. Vegetables for processing are grown only under contract with a processor.

Because much of the land is rented, the large commercial grower can move his operations to different farms in order to concentrate on the most profitable crops. Rent is usually cash and currently $50 to $100 an acre annually. In most of the vegetable areas two crops a year

are obtainable with proper crop combinations.

There are a few small vegetable farms, especially near the larger cities, which produce mainly for local markets. As a rule, these producers labor under more of a marketing handicap than do the small fruit growers with their cooperative packing houses.

The able and industrious vegetable grower with a little capital (perhaps $15,000 in equipment and operating capital) can often rent land, produce crops, and increase the scope of his operations to a profitable level. In the best districts, where two crops a year are possible, 20 acres of land (40 acres of crops) would probably be the minimum for a family farm. Since it is seldom feasible to double-crop all the land or to have it all in short-period crops, the general minimum of 40 acres is recommended. This will vary with the area and the crops grown; in some cases it should be 80 to 100 acres. The total capital required for land and equipment would be $40,000 to $60,000.

FORESTRY—may bring added income

Although not generally considered as farming, lumber and other forest products constitute an increasingly important part of our agricultural production. In 1956 the 5,881 million board feet of lumber produced by 683 sawmills in California was exceeded only by the output in Oregon. This great production was from three main sources: private timber holdings, national forests, and farms having some commercial forests. In addition to lumber, other important timber products are: piling, split fence posts and stakes, railroad ties, pulp wood, firewood, charcoal, and Christmas trees.

Commercial forest land in California as of 1953 was estimated by the U. S. Forest Service at 17,317,000 acres, mostly in the north and eastern mountain and pine regions of the state and in the Redwood and Douglas Fir region in the north coast counties. Over half is privately owned and of this about one-third (1,500,000 acres) is in small acreages on 2,675 farms. In the 1954 Agricultural Census over 10,000 farms reported more than 5,000,000 acres of woodland, although most of this would not be commercial forest. Forest products sold in 1954 from 1,323 farms were valued at $4,020,249, but this was a high year. Information about opportunities in farm timber production may be obtained from local offices of the Agricultural Extension Service. Several reports on timber resources and production, directed principally at large commercial operators, may be obtained from the School of Forestry, University of California, Berkeley.

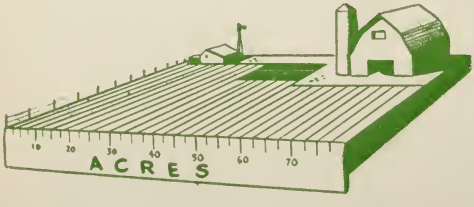
The sale of timber or other forest products sometimes adds income.

HOW BIG A FARM

will you need to realize your established goal?

One of the important factors of success, and hence satisfaction, in owning a farm is the size of the business—the net income-producing potential, rather than the number of acres or of animals. Net income is earned in the gainful employment of three things—capital (including land), labor, and management. The proportion of net income derived from each of these varies with the type and size of farm. Observations over the years have led us to believe that a California farmer can earn the going wage for the labor involved and around 5 per cent on the investment, plus a highly variable return for management—from nothing up to perhaps 10 per cent of the gross income. This is no assurance that any individual farm will make this much. It is certain to vary widely from year to year with changes in price and growing conditions. Much depends on the quality of management, with the first task that of organization on sound business principles—namely selection of the type of venture best suited to local conditions, adequate size, and sufficient capital.

Assets plus objectives will determine the kind and size of farm business. The man who is willing to work, but has little capital or managerial ability, will make his best living working for others. A family with some capital and managerial ability and the will to work hard for themselves is justified in wanting to own or rent a farm on which they can realize some of their ambitions. A man having only capital to contribute and wishing to invest it both for returns on the investment and long-term capital gains, will need a large enough farm to justify the employment of a competent manager. The family with other means of livelihood may want a part-time farm or country home. The experienced farmer with managerial ability can count on making a good income operating a large-scale commercial farm—perhaps at first for others and then for himself as he is able to rent or own land and hire labor. California has all these sizes and kinds of farms—and occasionally for sale.



The right size is very important.

The single family farm is defined as a farm that will furnish reasonable employment for a farmer and provide enough net income to support a single family. At times some hired labor may be necessary. It has the advantage that the farmer, being his own boss, makes his decisions and takes the consequences. Family needs and goals vary widely as to income level, but in suggesting the minimum sizes of various types of farms we have had in mind a net income level of $4,000 a year. Recent trends in farm size have been upward; families need more income than formerly, and with smaller profit margins in farming today, greater volume may be necessary to assure a given net income.

The capital required ranges from $30,000 for the smallest poultry farm up to $100,000 or more for a cattle ranch. As yet the single family-sized poultry farm, orchard, vineyard, and stock ranch are under little disadvantage as com-

pared to the larger commercial units. Larger vegetable and field crop farms have an advantage in that they can economically utilize large, specialized equipment, diversify more readily, and market in larger quantities.

The proportion of net income due to capital, labor, and management, respectively, varies with the type of farm. A range cattle ranch with an investment of $80,000 might, if well managed, earn the 5 per cent on the investment, or $4,000, and $1,000 for the labor performed by the operator, or a total of $5,000. On this small a ranch we would expect little additional managerial return.

In a $60,000 orchard or vineyard, the operator might secure a return of 5 per cent, or $3,000 on his investment, $2,000 for labor he can perform, and possibly an additional $1,000 for management. A minimum egg farm involving an investment of $30,000 should earn $1,500 from invested capital, $3,000 from labor, and up to $1,500 from good management.

Many farm families try to increase the size of the enterprise as soon as they can in the hope of assuring a more comfortable income. The difficulty here is that the very small business cannot earn enough surplus income with which to improve and enlarge the business. Adequate size is most important in the single family farm. Use the "budget test," page 45, to check a farm's adequacy before buying.

The two-family farm. A farm that provides employment for two workers and sufficient income to support two families has several advantages over the single family farm. The two workers can be a working owner and hired hand, partners, or a father and son. Many of the successful farms referred to as family farms are actually of this size. Such a farm is large enough to justify efficient modern equipment and advantageous diversification. Two regular workers facilitate operations requiring two men and permit vacations and rotation of work where livestock need daily attention. Such a farm is large enough to support both families while ownership is passing from father to son, or from a retiring owner to a tenant. The higher net income potential may enable an owner-operator to pay for the farm from its earnings within his lifetime. The larger potential also provides a buffer against unforeseen lower earnings or the need to shift enterprises to meet changing conditions and acreage adjustments. With two workers and their families so closely involved its disadvantage lies not only in the business but in the personal side. We recommend it as the desirable minimum sized commercial farm, however. The capital involved, in most cases, need not be quite double that of the single family farm, but the net income potential is apt to be greater than two single family farms of the same type.

Large-scale farms. There are some very large farm businesses in California, some of which may operate several farms. A few originated as Spanish and Mexican land grants before California was a part of the United States. Others resulted from large public land grants to railroads and from the purchase of public and other lands by financially able individuals and corporations in the early days. Some have been bought and held by large investors, perhaps with earnings obtained outside of agriculture. But many have grown large through the efficient management of an individual or family and through the investment of surplus earnings in additional resources. Some large operators are only part owners, renting much of the land they farm, and a few rent all of it.

Some of these large farms and holdings continue profitable under sound management. Others may become unprofitable for various reasons and ultimately be dispersed. These large-scale farms have some advantages over the two-family size. They usually have or can

obtain adequate capital for expensive irrigation wells and larger specialized equipment, investments which are economical only if spread over large acreages. They can obtain and fulfill advantageous contracts for marketing large quantities of a uniform quality of product. With large areas and facilities they can diversify to spread risk and for better use of resources.

Large farms are vulnerable to high overhead and labor costs when employees are disinterested or incompetent. Another disadvantage will be in the 160-acre limitation on irrigation water obtainable under United States Reclamation Projects, as in the completed Central Valley Project if this limitation prevails and is enforced. But the principal limitation on the continued success of large farming ventures is management—the larger the business the higher the managerial ability involved. Large-scale farms are not, as of now, expected by the author to swallow up smaller farmers and dominate California agriculture. The trend in commercial farming is to increase in size, but large-scale farms will come and go. The large farmer and investor can find suitable properties occasionally for sale in any of the regions of California.

Part-time farms are those with some agricultural production for sale, but with net income from farming too small for the maintenance of a family. The success of such a unit depends upon the reliability of the outside income, whether from investment, pensions, or employment away from home. California has many attractive farms in this group—around 14,000 were so classified in the 1954 census. Some of these were probably developed or purchased under the supposition that they would prove to be adequate single family farms. Unfortunately some are still resold on that basis. Occupants of such farms with no other income must secure outside employment and lose some agricultural production.

There is a definite though limited place for the part-time farm, provided the owner realizes the possibilities and limitations. It offers a mode of life attractive to some families who have a dependable income which they wish to supplement with earnings from capital and labor employed in a suitable small-scale agricultural enterprise. But the disadvantages of such small-scale production are great and are increasing. It is difficult to produce many fruits and vegetables of satisfactory market quality without proper equipment and timing. Hiring such work done by a contractor on a small acreage is costly. Taxes and other costs per acre are higher than on commercial farms. It is difficult to market small quantities. Many enterprises such as livestock, dairying, and field crops are not suited to small-scale production. Some fruits, berries, vegetables, flowers, poultry, and rabbits offer about the only opportunities. It is the author's belief that part-time farming will decline and such places will largely move out of the agricultural group through subdivision because of the increasing pressure of population.

The small farm home. The suburban or rural home is not intended as a commercial undertaking. It is purely a place to live, with production limited to food for family use and only small quantities occasionally sold or given away. Such homes are based on personal preference for a rural environment and the hope of enjoying a better living on the same income than in a city. They are better suited to fully employed persons than a part-time farm, and necessarily limited to families with an adequate outside income.

The amount of money saved by home food production is often overestimated. Such production involves expense for water, seed, fertilizers, feed, etc. Nowhere can a family produce its entire supply of fruit, vegetables, milk, eggs, and meat. Home food production is restricted to a

few locally adapted fruits and vegetables, poultry for eggs and meat, sometimes rabbits, possibly a milk goat. Only one-quarter to one-half an acre can be profitably used for such a home, including the dwelling and living area. The saving in food costs can seldom exceed $300 a year for an average family. Only in strictly rural areas would it be feasible to keep a cow and raise a larger meat animal which might add somewhat to the food saving.

Although more common near cities, there are country homes in all parts of California, some occupied by retired couples, others by local workers on farms and other businesses. Home food production, though limited by local soil, climate, and water supply, can contribute to the nutrition and better living of the occupants. Such a home will not support a family in periods of unemployment, but can cushion distress and enable a family to survive in better physical and financial condition than could a place in town.

Make the budget test

However, the final and safest check on the size of farm business is to calculate a budget of probable income and expenses for the farm under consideration. First, learn the accurate acreage of each crop and land use. Then carefully estimate yields and total production of each crop and product. Take the time to verify past production with disinterested persons and firms handling the products. Adopt probable average future yields and production, taking into account variations due to natural causes and management. Make careful price estimates for the next several years. Learn actual past prices for the grade or quality of products, and method and point of sale. Adjust these to near future conditions by using price outlook information. From production and prices, compute probable future income.

Next, determine all production costs such as taxes, water or power, hired labor, supplies, etc. Some can be obtained from the previous owner, taxes from the county assessor, water costs from the irrigation district, and other items from suppliers. Some expenses will need to be estimated. Typical schedules of labor and materials and costs are available on some crops and livestock at local Agricultural Extension Service Offices. Finally, subtract total expenses from income to arrive at the estimated net income—an average for the following few years.

Actual net income will probably vary either above or below such a careful estimate. But these calculations and facts are essential for accurate judgment in such an important decision as buying a farm. You can employ a competent professional appraiser to make such a budget test. Some financing agencies require or will help make such a budget test in connection with making a loan.

If the estimated net income from such a budget test is too small to meet the income needed for living and debt payments, the farm is too small or too poor to meet your needs. Likewise, if net income is too small to pay the return desired on the investment by an investor, the farm is too small or poor, or the price is too high. This budget test is suggested as a sound business procedure in all farm purchases, large or small, for any purpose, to assure meeting the goals and wishes of the purchaser. On the positive side, the buyer with capital, labor capacity, and managerial ability is seeking their gainful employment. This budget test will help him find a desirable investment.

The larger the deal the more justifiable the time and cost of estimating income and expenses, appraising carefully market and agricultural values, and making a sound management plan.

GETTING A START

in California agriculture without capital is difficult

"...it is suggested that other socially approved ways of getting capital (to start farming) are to inherit it or to marry it. These involve elements of great chance. They also require phenomonal dexterity in choosing your parents and in being able to live under marital arrangements motivated by such desires."

The above quotation is from *Financing a Farm Business,* Southern Farm Management Extension Publication No. 8, by Harry M. Love. It is quoted here because it is brutally true and because it very neatly takes care of the question asked so often, "How about marrying the boss's daughter?" The following suggestions for getting into California farming are not nearly so romantic but are more commonly attempted—often successfully.

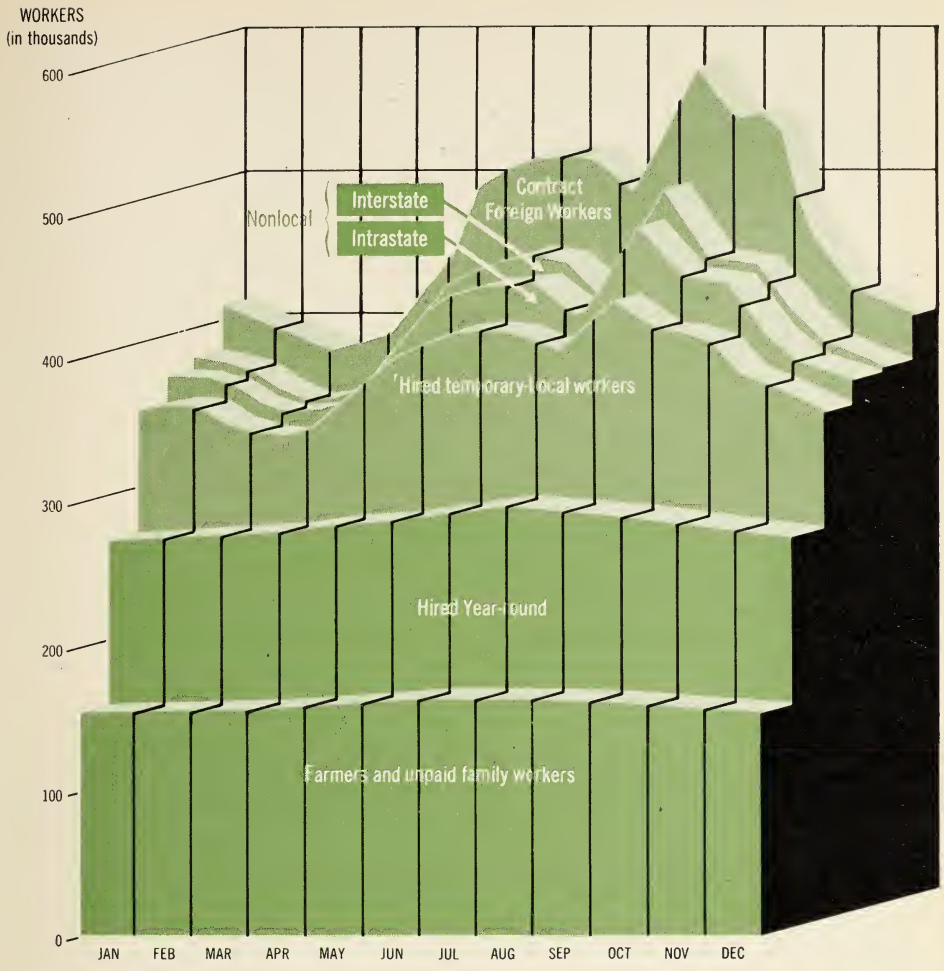
One way for a man with little capital and experience to enter the farming business is to start at the bottom. As a footloose hired laborer, he can explore the different regions and types of farming before choosing a permanent activity and location. He will gain experience, and if industrious and frugal, can save a little.

His next step is to rent a piece of land or a farm and increase his earnings by investing a little capital and using his managerial ability. This is not feasible with all types of farming. The next step is the down payment on a farm of his own, with the expectation of completing the payment during his working lifetime and attaining full ownership, having made a living over the years and saved the capital invested in the farm. At the present time, with land values high and competition keen, progress is slow. But while there is room for only a few farm owners at the top, other positions along the way are worth considering.

Farm labor—much is seasonal

The farm labor needs of California are quite different from those in the midwestern and eastern states. In addition to some 160,000 farm family workers and about 120,000 hired year-round hands, large numbers of temporary workers are needed for seasonal tasks in many parts of the state at different times of the year. The number of such seasonal workers varies from about 110,000 in the spring to a peak of about 300,000 in the fall. Most are hand laborers for fruit and vegetable tasks which are not readily mechanized.

The year-round workers are largely tractor drivers, milkers, irrigators, general farm hands, and others who perform a variety of tasks with or without supervision. Single men are usually fed and housed in bunkhouses on the farms or in nearby central labor camps. Married men are often provided with houses, or may live in their own homes near-by. The farm hand, whether temporary or permanent, seldom lives with the farm family. Permanent hands may be paid by the hour, day, or month. For many years wages paid by California farmers have been higher than in most other states. Wage rates vary according to area and the responsibility and skill required by the job. General farm hands may receive 90¢ to $1.25 an hour, or $200–$300 a month. Skilled milkers may receive $350 a month, or even more in some areas; tractor operators $1.25–$1.50 an hour. Permanent employees may receive a house, milk, and other food from the farm, water, electricity, and sometimes a bonus from profits in addition to their wages.



Temporary workers include local and nonlocal domestic farm laborers and, during labor shortages, foreign workers contracted under international agreements. Most of these are from Mexico, although a few have come from Japan and the Philippines. Most temporary workers are local people who live in towns or communities near-by. Some work most of the year at miscellaneous seasonal or casual jobs on the different farms, others shift between farm and nonfarm work at different times. They include women and youths who enter the labor market for certain crop activities only, such as fruit-picking, packing and drying. The nonlocal workers include both intra- and interstate migrants—single men and families. This mobile work force meets the peak needs of many crops in widely scattered areas. The temporary domestic workers are usually paid hourly or piece rates. Hourly rates vary according to the type and duration of the work—70¢ to $1.25 an hour. Experienced workers in certain crops can

Green highway signs help to guide both workers and employers.

make $1.50 an hour or more at piece rates when "the picking is good." The contract foreign workers must be paid the prevailing rates for domestic workers engaged in the same work in the same area under the same conditions.

The farm labor offices of the California Department of Employment assist the farmer in recruitment of domestic workers and in procurement of foreign labor during labor shortages. These offices place farm job applicants and guide migrant workers to areas of need.

Regular farm employment offers an opportunity to gain experience, to become established in a community, and perhaps to save something toward a start in farming. It is one way in which to qualify for better farm jobs or for opportunities to rent or operate farms on shares.

Contract work pays, but requires some equipment

There are also opportunities in farm service occupations such as servicing and repairing equipment, handling and marketing products, and performing farm operations on a contract basis. In areas where there are many small farms, contract operators do much of the plowing, tilling, spraying and other pest control work, and the application of fertilizers. In some of the field crop areas, contract operators with large, efficient equipment take care of most of the threshing, hay baling and other harvesting operations. Contract operators who possess equipment and who can obtain a skilled crew may often perform these operations more economically than can the farmer himself with owned equipment and seasonal help.

Land leveling is usually done by special contractors.

With the development of other large and expensive machines, such as the beet topper and cotton picker, this type of service business is increasing. Thus, the experienced farm worker with sufficient capital, or the part-time farmer can improve his earnings by obtaining equipment, assembling a crew, and serving a number of farmers and absentee owners on a contract basis.

Aircraft are doing an increasing number of farm tasks such as pest and weed control, and seeding. Operators work on a contract basis at mutually agreed rates.

Leasing usually requires a good local reputation

The renting of family-sized farms is less prevalent in California than in the central and eastern states. The 1954 Census of Agriculture listed 13,782 tenants in California (11 per cent of all farm operators), with 18,328 more who rent part of the land farmed. About 40 per cent of all the farm land was rented. Many renters are large commercial operators specializing in certain crops. They rent here and there to concentrate on the preferred crops and sometimes to avoid the necessity of crop rotation. Grain, rice, lettuce, or potato growers are among those who rent considerable acreage and own expensive special equipment.

There will *always* be opportunities to rent irrigated land for field and vegetable crops. However, opportunities to rent are not open to newcomers with little capital. Adequate equipment and a good local reputation are usually required of anyone wishing to rent a farm.

In Humboldt and Sonoma counties many dairymen are tenants. Orchards and vineyards are seldom rented because the owners, even if they live elsewhere, prefer to operate their own farms through employees or contractors. Occasionally a good tenant can operate such a farm for an absentee owner or estate—usually on a share basis. With field crops the rental payments are generally a share of the crop; with vegetables they are usually cash, payable in advance.

The operating capital required in leasing will vary widely with the type of farm. For grain and rice a large tractor and other equipment costing about $30,000 may be required, also sufficient cash to continue operations until further capital can be borrowed on the growing crop. With livestock and dairy farms the tenant usually owns the stock and movable equipment, but sometimes a man with no stock and little capital can operate a place on shares.

In order to make a satisfactory rental agreement the tenant will generally need $5,000 to $25,000 in capital for stock, equipment, and necessary cash reserves. Remember, the rented farm must be larger than the farm that is wholly owned to provide the same family income after rent is paid.

BUYING A FARM

involves credit, laws and customs, important decisions

The purchase of a farm may be the most important step in a lifetime. Future financial success will largely depend upon the farm selected and the terms of purchase. The purpose is the first item to be considered. If the farm is bought as an investment for leasing or operation by employees or for later resale, it may differ from what would be selected as a combined home and means of livelihood. Personal preferences concerning climate, community, and type of farming become important in the choice of a lifetime home and occupation.

The right time to buy is difficult to determine

The best time to buy a farm is naturally when prices are temporarily at low ebb and just before they start to rise in response to an improved agricultural outlook. Unfortunately that precise time can seldom be anticipated or recognized. The graph on page 9 shows that California land values declined with the depression of 1930–34, recovered slightly between 1935 and 1938, declined to a low in 1940, and then rose till after World War II, when they declined slightly to a low in 1950. Since then, except for a slight dip in 1954, they have been on the increase. As of July 1958, California land values were 63 per cent above the 1947–49 level and increasing despite a recent decline in farm product prices and earnings.

The present relatively high cost of California farm property is due in part to the relatively greater influx of population and new industries to California during and immediately subsequent to the war years. The purchase of farm land at inflated prices for industrial and subdivision purposes displaced farmers, who in turn could afford to buy new farms at high prices. Other prosperous farmers, encouraged by the high level of their earnings since the beginning of the war,

were eager to buy more land, sometimes at prices higher than actually justified by probable earnings. In a wave of generally high earnings many farms and ranches in California were also bought by nonfarmers for investment, speculation, and personal use. As a result of the above, much California land today has a market value higher than its conservatively estimated agricultural earning power.

Agricultural value is that value upon which a reasonable rate (perhaps 4 to 6 per cent) can be earned by agricultural production. It is calculated by balancing probable yields and prices against probable expenses on an annual basis (exclusive of interest on the capital investment represented by the property in question) and thus estimating net annual earned income. The estimated net annual earned income should approximate 5 per cent (varying from 4 to 10 per cent depending on the risks involved in the type of production) of the total agricultural valuation of the property. Agricultural value should be distinguished from other market influences, such as residential value, speculative value for resale for other than agricultural purposes, or the possibility of finding oil.

Right now (1959) may or may not be the best time to buy land in California. With increasing population and diversion of land from farming, good land will become scarcer and more in demand and the long term trend in value will surely be upward. There may be dips, recessions, and surpluses of farm products. Perhaps the best course for a purchaser is to buy when he is ready, if he can find the place he wants at a price he can afford to pay. The prospective purchaser would do well to apply the "budget test" on page 45, have an independent appraisal made, and if he is not thoroughly familiar with the locality and type of farming he is considering, he should secure the best financial and agricultural advice he can obtain.

Capital is a major requirement

It takes capital to purchase, equip, and get a farm into operation. First, there is the down payment for the farm, usually from 10 to 50 per cent of the purchase price, depending on the purchase agreement and the kind of a loan that can be secured. Second, a substantial additional investment must be made for equipment, sometimes livestock or poultry, and sometimes to further improve the land or develop a perennial crop such as berries or fruit. Third, there must be operating capital for conducting operations until a crop is produced or income is forthcoming. Fourth, there must be additional capital for personal living expenses until income exceeds operating costs; and fifth, some reserve funds to cover unforeseen losses are desirable.

Limited credit for the purchase of equipment and stock, and for operating the farm may be obtainable, but usually for only a short period and with rather high repayments. The greatest risk is in borrowing more than can be repaid.

Experience shows that half the total capital needed for all purposes is about all that can be safely borrowed and repaid with interest from farm earnings in the usual 20 to 30 years of a purchase loan. To borrow more means a reduction of funds available for family use, increased danger of default in debt payment, leading possibly to loss of the farm and complete bankruptcy. When as much as 75 per cent of the total capital must be borrowed, success will depend on unusually favorable circumstances permitting rapid reduction of indebtedness before prices fall and conditions change, as well as unusual economy and management.

For example, a single family dairy farm of 30 cows for the production of manufacturing milk would involve the following approximate investment: 54 acres of irrigated land with buildings and dwelling, $40,000; equipment for farm and dairy, $6,000; dairy herd, $10,000—

a total of $56,000. A long-term mortgage loan of $20,000 on the real estate should be obtainable. At 5 per cent, amortized over 30 years, annual payments would be $1,300. The net farm income potential with good production and management would be $160 per cow, or $4,800 a year. Subtracting the long-term debt payment would leave only $3,500 for living and any other debt payments. If the buyer needed another $8,000 of short-term credit for equipment and dairy stock, his total debt would be $28,000 or half the total investment. To repay $8,000 in five years with 6 per cent interest would call for $2,000 a year, which would leave only $1,500 a year for living expenses during the first five years. Certainly, he could not borrow and repay from earnings more than half of the capital involved.

A farming plan and budget test are very important before incurring any debt. Lending institutions will usually help, if requested, and many of them require or make such a test before closing the loan. Production, prices, expenses must be carefully estimated to arrive at an estimate of net income. This net income must be sufficient to cover debt reduction and living costs. If there is not enough capital to make a purchase without incurring too great a debt, the buyer should make other plans—find a place within his means, wait, or rent.

Credit is useful—within limitations

Modern farming requires so much capital for land, equipment, and operations that most new farmers have to borrow. The proper use of credit makes it possible for them to farm when they could not otherwise. It also makes farming possible on a larger, more profitable scale. Occasionally credit can tide over a crop failure or some other unforeseen circumstance, and save the business.

Borrowing—using the capital of others—involves risks for both lender and borrower. To safeguard his capital, the lender demands a mortgage on property that can be turned into cash to satisfy the debt. The borrower faces loss of essential property if he cannot meet his payments. *Credit should therefore be used cautiously and only for productive purposes.* By "productive purposes" is meant farming operations that make it possible to produce enough net income to repay the loan with interest and leave something over for increased personal income.

Credit must be used very sparingly to maintain personal expenditures at an accustomed level when income declines. Capital can soon be exhausted, financial security impaired, and the farm lost.

California is well served by credit facilities, both for short-term loans of operating capital and for purchase loans. Qualified veterans have been granted special aid in obtaining credit by state and federal legislation. They are advised to inquire about these special programs at veteran advisory or service agencies.

Private banks, cooperative production credit associations, and other agencies, private and public, extend short-term credit for operating purposes. Rarely, however, can farming operations be financed largely with borrowed funds. Operating loans are usually made only when fully secured by the net worth of the borrower, as shown in his financial statement, or by a chattel mortage on a crop or other property. A newcomer cannot obtain such favorable short-term credit as can the well-established farmer of good reputation. *When buying a farm one must reserve adequate funds to carry on operations until income begins.*

Sometimes, advances may be obtained from cooperative or private marketing agencies. However such advances, on a contract for the sale of farm products to a specific agency may result in a lower price than otherwise obtainable and hence become a high-cost form of credit. Similarly, the purchase of feed and sup-

plies on credit may cost more than when funds are borrowed from a lending agency for cash payment.

Credit for purchasing equipment, breeding stock, or dairy stock, or for making improvements, with repayment over a number of years, may be obtained from banks, livestock credit associations, dealers, and other agencies. Such loans are usually secured by a chattel or a real estate mortgage. Short-term credit, with interest at 6 per cent up and charges for inspection and other services, may easily increase operating costs enough to wipe out a net income. In general, short-term credit should be used as little as possible for ordinary operations, but may well be reserved for emergencies or for special opportunities to expand or improve production and income. Again, it is recommended that a budget of future income, costs, debt repayments, and living costs be used when obtaining credit of any kind.

Farm purchase or long-term mortgage credit is available from many sources, including individuals, commercial banks, national farm loan associations, and insurance companies. These various public and private lenders are more or less competitive. Policies vary in appraisal of the farm, in the percentage of appraised value that will be loaned, in the rate of interest, and in the period and method of repayment. Purchase loans are usually made with interest rates at 4½ to 6 per cent, and with repayment periods up to forty years. In general, the farm buyer can borrow all that he can safely undertake to repay from his net income over the period of the loan. If he borrows more than this, he incurs the risk of losing the farm and his own investment in it. Table 5 shows some sample amortized payments for loans.

When financing a farm it is advisable to elect a long repayment period with low rate of interest, reserving the right to make earlier and larger payments without penalty as a reserve against periods of low prices and decreased ability to meet regular payments. A strong lending institution administered by men of character and understanding is usually a better source of long-term credit than an individual since it can make loans and furnish better service over longer periods. It is also less likely to make loans that cannot be repaid from earnings.

Selecting the farm— an all-important step

Assuming that you want to buy a farm, and have in mind the general location, kind, and size, your next step is to find one or more for consideration. A good place to start is with a local real estate broker, preferably one recommended as

Table 5. Annual Payments to Amortize a Loan of $1,000

Number of years	4%	4½%	5%	6%
1	$1,040.00	$1,045.00	$1,050.00	$1,060.00
3	360.35	363.77	367.21	374.11
5	224.63	227.79	230.97	237.40
10	123.29	126.38	129.50	135.87
15	89.94	93.11	96.34	102.96
20	73.58	76.88	80.24	87.18
25	64.01	67.44	70.95	78.23
30	57.83	61.39	65.05	72.65
35	53.58	57.27	61.07	68.97
40	50.52	54.34	58.28	66.46

There may be a good reason why it is . . .

specializing in farms. Not all available farms are listed with brokers; some are sold privately without being listed or advertised. Local inquiry may uncover a place that might be sold if the offer were satisfactory. Sometimes farms for sale are advertised in local newspapers, although few of those advertised are profitable commercial farms.

When a farm is found that seems promising, the prospective purchaser should inspect it thoroughly and find out all he can. The owner should be queried about the soil, water supply and rights, outside grazing permits (if a ranch), acreage of fields and crops, crop yields, prices and costs. The information thus obtained should be checked against information from other sources: neighbors, dealers, irrigation district, power companies, etc. Locate it on maps at the County Assessor's office and learn its assessed value and county taxes. If it still looks good, work up a budget of income and expense to see whether it qualifies, and what price should be offered.

Before buying, consult a local farm advisor of the Agricultural Extension Service. Tell him your plans and wishes. He can tell you whether or not your plans are feasible. As a public employee, he can give you factual information, but he cannot inspect the place with you without the seller's consent. He can give you information to help work out your budget, but, not being an appraiser, cannot say what would be a fair price for the farm. People have sought help from farm advisors on many occasions *after* buying a farm, only to learn that they have no chance of realizing their plans. It is best to prepare a farming plan first and check it against a budget before making an offer to buy.

Most buyers of farms would also do well to have the farm appraised by a competent independent appraiser. He will inspect and appraise the land, buildings, trees, and crops, and prepare a detailed report which will include the total agricultural value and current market value of the farm. The fee for this professional service is a wise investment. It helps the prospective buyer to avoid making a serious mistake; it also helps him to arrive at a fair purchase price and to establish a basic valuation for the assets purchased.

The actual purchase is usually initiated by an offer. The seller may expect to bargain a little over price. This offer may be made subject to certain conditions, such as obtaining a purchase loan of a certain amount. Then, before the deal is closed, it is necessary to obtain the loan.

This brings in the financing agency with its appraisal. That appraisal may furnish the additional assurance that the place is all right. If at any point in the negotiations or financing the farm fails to qualify, regard this failure as a safeguard to you, the purchaser; not as evidence that the appraiser or lender is too conservative. Look for a better farm that *can* qualify.

California real estate laws provide that when a buyer or seller obtains any service from a licensed broker in connection with the sale of a listed property, the broker's commission is 5 per cent of the purchase price. Usually the commission

is deducted from the sale proceeds and thus reduces the net amount received for the property. It does not always follow, however, that the price would be lower by the amount of the commission had the broker not been consulted. The broker performs services in locating a farm, bringing buyer and seller together, negotiating the price, executing the contract of sale with its appropriate terms, and arranging for the escrow, title insurance, and financing. He serves both buyer and seller.

Exchange of money and mortgage notes or a deed of trust on the part of the buyer on the one hand, in return for the deed to the property on the other, is usually accomplished in escrow by a local bank or title insurance company.

The validity of a title to California property may be assured through the purchase of the title insurance at a cost of around .4 per cent of the purchase price (about $247.50 on a $50,000 property), with some local variations. The insuring company investigates the title. If it grants the insurance, it guarantees the title to be good at the time of transfer to the amount of the policy. It will reimburse the policyholder for that amount if some earlier flaw in the title shows up at any later date, so long as he holds that property. Credit agencies loaning on a mortgage usually require title insurance.

Deeds and mortgages should be recorded with the County Recorder, and federal documentary tax stamps are required on the deed to an amount of 55 cents on each $500 of the purchase price. Prepaid or accrued taxes, insurance, and other overhead or expense items may be prorated between buyer and seller according to custom or specification in the contract of purchase. The expense of appraiser, broker, escrow, and title insurance can be avoided, but both buyer and seller should recognize the hazards incurred and substitute other safeguards.

After you buy

In farming and owning property, it is highly important to maintain complete financial records for management purposes, and to avoid overpayment of income taxes. With a farm you buy several kinds of property: land, buildings, equipment, a dwelling, and sometimes bearing orchards or a growing crop. The purchase price should be regarded as the combined cost of all of these items, some of which are subject to depreciation, and may be sold later for a capital gain or loss. For example, that part of the purchase price allocated to a growing crop is part of the expense of producing that crop. A detailed appraisal, as mentioned above, can be of help in setting up the allotted values of each item in the accounts covering the business. As soon as a purchase is about to be closed start your records on this farm business, making a careful classification and recording all expenditures—personal, capital, and operating costs. For help in selecting and starting a suitable record system, obtain Circ. 460, Financial Records for California Farmers.

THE SUCCESS FACTORS

should be constantly borne in mind

Commercial farming in California is an intensive, specialized business. To be successful, good management and correct technical information must be applied. Farming is complicated by wide fluctuations in income from year to year, so it requires careful management of both farm and personal finances.

Cash costs of producing crops and livestock are greater in California than in most states. Local taxes are higher because of high land values and the public services available. One must consider irrigation costs, the high pest control and fertilizer requirements of specialty fruit and vegetable crops, the great seasonal need for labor, the high wages of help, and the elaborate mechanical equipment required. The farmer must be a capable manager to meet these expenses adequately, but without extravagance. He must be skillful as a farmer so that his returns will cover these costs and yield a profit. His products must be good enough to command an adequate price; he must market them at the proper time and place.

Costs, returns, and profits for many important California farm enterprises have been studied by the Agricultural Extension Service over the last thirty years. These studies show that yield per acre, per cow, or other producing unit, is the most important profit-determining factor. The biggest profits go to farmers with good farms who maintain good production. The newcomer may obtain technical information on methods employed through local Agricultural Extension Service offices and farm advisors.

The second important consideration is the price received for products as it reflects the quality of the product and the marketing choice of the operator in any given year. The usual producer in California can choose his marketing outlet among several excellent cooperative and private agencies, dealers, or processors.

High costs seldom make a good farm unprofitable, and low costs seldom rescue a poor one. In determining profit, the most important factors are yield and price. Costs will, however, whittle away at profit or net income if not watched carefully. The successful farmer in California keeps good records, analyzes his business, attends educational and other farm meetings, and earns enough to pay a sizable income tax.

Check List of Success Factors in Farming

Answer "yes" or "no" to the questions in the check list on the back. The results should help to determine the chances for success of either a present farm, or a farm under consideration.

If the answer is "yes" to all questions, the chances of success and long-time security are excellent. If too many "no's" appear, it would pay to be wary of the investment.

If only a few "no's" appear, don't be disheartened because something can be done about all except possibly No. 2, which can be improved only by enlarging the present farm or changing its type.

Note that "prices received for products" is not mentioned in this list. While good prices will aid in the success of a farm, the operator should be able to withstand low prices.

CHECK LIST OF SUCCESS FACTORS IN FARMING

	YES	NO
1. Is the farm business of adequate size? Is it big enough for commercial production, to meet income goal, to provide enough employment?	_____	_____
2. Are the natural facilities good? Has the farm suitable soil, climate, adequate water? Is the land adapted to the type of farm contemplated? Are good yields obtainable?	_____	_____
3. Are the other facilities and equipment available? Are they owned, owned jointly, rented, contracted for? Are essential buildings well planned and located?	_____	_____
4. Are the farm enterprises well selected and balanced? Are they profitable? Is it possible to specialize, or rotate enterprises to make best use of and maintain soil fertility? Can best use be made of labor, equipment, water?	_____	_____
5. Are high yields or production possible from each enterprise? Is the farm getting good production per producing unit, through proper selection of varieties, timely operations, correct use of sprays, fertilizers, etc.?	_____	_____
6. Does the farm yield high quality products for each enterprise—i.e., the best commercial quality—through the use of proper varieties, cultural care and preparation?	_____	_____
7. Can production costs be kept low for each enterprise? Are the minimum essentials being provided in the most economical manner? Can good materials be bought at the best time and place?	_____	_____
8. Are the products being marketed wisely—sold by the best method, through the best channels, at the best time?	_____	_____
9. Is the financial management sound? Can the farm meet its financial obligations when due? Is the budget balanced, with available funds being wisely allocated to farm costs, debt retirement, capital outlay, and family living?	_____	_____
10. Are tenure and operating agreements secure? Is there a written lease (if rented) with renewal provisions and a fair rent? Is there a satisfactory, written father-son, or other partnership agreement? Is there a provision for transfer or inheritance in case of death?	_____	_____
11. Are the labor relations good? Is it possible to get and hold good workers, through good working conditions, good treatment, training, and housing?	_____	_____
12. Does the farm make for a healthy, happy family? Is food being home-produced, for better nutrition and living? Is the farmstead planned for beauty, convenience, recreation?	_____	_____

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